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84 Annual Meeting of the Medical Society of Nova Scotia

PRESIDENTIAL ADDRESS

J. R. CORSTON, M.D.

CUSTOM decrees that your president shall give an address. Custom and desire both impel me to express to you my appreciation of the honour you have done me in electing me to this office. When I reflect upon the quality of my predecessors in this chair, men who have been responsible for most of what we are proud of in the medical traditions in Nova Scotia, my sense of the honour done me is intensified, and at the same time tempered by a feeling of personal inadequacy.

The Medical Society of Nova Scotia has always meant a great deal to me. The pages of her history are redolent with memories of such men as John Stewart, W. S. Muir, D. A. Campbell, W. H. Hattie, to mention but a few, and to the privilege which I enjoyed as a youthful member, of association with such fine and generous souls, I gratefully attribute the larger part of what conception I have of the ideals of our profession.

This Society, moreover, has been to me the avenue of a valued wide acquaintanceship with the medical profess on of the province. There was a time during my service as Secretary, when, I think, I knew, or at least knew of, practically every practitioner in Nova Scotia. In the intervening years, the grim reaper and other agencies have narrowed my acquaintance to some extent, but I feel that I still know most of you, and that I am standing here, trying to give a presidential address, among friends.

In my brief remarks this morning, I shall attempt to take an objective glance at our Society and some of its workings,—I shall ask a few questions, and I shall offer a suggestion or two.

When I first joined this Society, now over thirty years ago, our size and activities were restricted, as compared with today. Every registered practitioner in the province was a potential member, but the actual members were those who attended an annual meeting and paid the modest fee of two dollars. The chief factors in the continuity of the Society were the Honorary Secretary, a more or less permanent official, and the enthusiasm and continued interest of such men as I have mentioned above.

We were far from being a puny organization, however, as was attested by the manner in which the meeting of the Canadian Medical Association under the presidency of John Stewart, at Halifax in 1905, was staged by our Society. Some of you will remember the event.

This state of affairs, with men belonging or not belonging, as they attended or stayed away from the annual meeting, continued until the post war period, when the idea of a more closely organized profession throughout Canada began to gain ground. It was at this point, I think, that the Society first became

acquainted with our friend, Dr. T. C. Routley, who even then was, as he still is, the most active agent in all Canada in matters of medical organization.

In 1920-21 we made a determined and successful effort to enlarge and put on a more permanent basis our membership, and to effect closer affiliation with the national body, the Canadian Medical Association on the one hand, and with the local or county societies on the other.

We engaged an associate secretary, Mr. D. A. Cameron, who visited every practitioner in the province, promulgating the scheme, and who brought about the subscription of a foundation fund for our enlarged Society of some three thousand dollars. The proposal included the immediate establishment of a permanent office, a paid secretary, and the possible establishment of a local journal.

All of these objectives have long ago been reached. At the present time, as we have heard, our paid membership numbers 301.

The affiliation which we have with the Canadian Medical Association consists in the membership in its Council of our President and Secretary, and some seven others of our members, annually appointed by us,—in the representation of our Society on the Executive of the Canadian Medical Association by one member (elected by the Canadian Medical Association),—and in the appointment by us of a local advisory committee to the Editorial Board of the Canadian Medical Association Journal.

Our affiliation with local medical organizations in the province is somewhat closer. They are Branches of our Society, nine in number, and membership in them is prerequisite to membership with us for all practitioners in their respective areas. They elect representative members to our Executive in proportion to their numbers.

As you are all aware, there has been during the past three years a movement afoot to effect still closer relations between us and the national body. I refer to the Canadian Medical Association Federation plan, which proposes, in this province, the merging of the Medical Society of Nova Scotia with the Canadian Medical Association, and the changing of our name to "Canadian Medical Association, Nova Scotia Division". We have approved the principle and are waiting the working out of details by our Study Committee. I shall not discuss this proposal here, as we shall no doubt hear about it in a few minutes from the Canadian Medical Association officials who have come to visit us.

I wish rather, at the present time, to draw your attention to one or two points in the working of our Society as now organized.

Is there not, to some degree, a lack of continuity in the activity of our Society in the periods between annual meetings? It is true we have a permanent Secretary and an office, established at present in Halifax. His, the Secretary's, interest and industry on behalf of the Society are the fair object of commendation rather than adverse criticism.

Also, I am not forgetting the valuable work being done throughout the year by our various standing and special committees, nor that of our BULLETIN.

But, I fear, for the membership at large, and for the Branch Societies, the affairs of the provincial society are tending to become live issues only during the two or three days of our annual meeting, and to lapse into the limbo of "deferred business" in the intervals.

As a partial remedy for this, I respectfully suggest more frequent meetings of our Executive Committee. This committee is charged with the duty of conducting the business of the Society between the annual meetings.

The practice in recent years has been for it to meet only once per year, on the evening preceding the annual meeting. Its members, some thirty in number, from the various branches, are there confronted by the whole business accumulation of the year, and asked to make recommendations regarding the various matters, to the general meeting of the following morning. In many cases the Executive members have had little or no opportunity of studying the questions, and are consequently handicapped in making their decisions.

A semi-annual, or possibly a quarterly meeting of the Executive would, in my opinion, make for a better informed and more efficient conduct of the business of this Society. If at all possible, at least a partial refund of travelling expenses of the Executive should be provided.

An alternative, though in my opinion an inferior plan, would be for the Executive to depute a sub-committee for these mid-year meetings. Any such sub-executive should be at least large enough to include one representative from each Branch Society. My objection to this contracted body is that I think that general interest in the business of the Society, which is what we are trying to stimulate, varies directly with the size of the body transacting the business.

Another subject to which I invite the consideration of this Society is "Medical Economics". This term has come to be applied to the study of the relations of the medical profession with the public, and with the state. Its various phases include schemes of health insurance, public health administration state medicine, and others.

It is obvious to the most casual observer that the problems of Medical Economics are of increasing general interest to the profession and to the public all over Canada, and of very acute and particular interest in some parts of it. At every medical convention during recent years we have been hearing that marked changes in our relations to the public and state are about to occur. Most often we hear statements to the effect that a system of Health Insurance, on either a provincial or a national basis, is inevitable. Whether or not this is so I cannot say, but I feel that we in Nova Scotia should be giving more attention to this and allied subjects than we have been giving.

May I briefly review a little of what has recently been done regarding those problems by the Canadian Medical Association, the Ontario Medical Association, and the College of Physicians and Surgeons of British Columbia.

At the meeting of the Canadian Medical Association in Calgary in 1934, the Committee on Economics laid down and had approved by the Association, certain "Principles of Health Insurance" seventeen in number. A revised and amplified form of these Principles was approved at the recent Ottawa meeting.

Some of the provisions in these adopted principles were:—

1. That the professional side of Health Insurance Medical Service be the responsibility of the organized medical profession through a Central Medical Services Committee and local committees, who would be responsible for the provision of adequate medical service, the disciplining of members, and the taxing of accounts.
2. That medical care for indigents be provided under the Plan, the State to pay the premiums of the indigent.
3. That the insured person have freedom of choice of general practitioner.

4. That the insurance fund should receive contributions from insured, employers, and State.
5. That the medical practitioners of each province be remunerated according to the method or methods which they select.
6. That the volume of work demanded from, and the remuneration to members of the various professions, be such as to assure a standard of service equal to or better than present day standards.

I have mentioned but a few of the seventeen Principles, selecting those which I thought to be of outstanding interest to us in Nova Scotia:

It is to be noted that in the formulation of these principles, and in the survey of the costs of medical practice preliminary to this formulation, no assistance was received from the Medical Society of Nova Scotia, though, I understand, it was asked for.

The only provinces which gave co-operation by reporting on medical economic problems within their borders were British Columbia, Alberta, Manitoba and Ontario.

Of special interest in these reports is the item about the administration of medical relief by the Ontario Medical Association. By arrangement with the Government of the Province this Association disbursed to its members during the past year the sum of $3,937,731, as payment for the treatment of 565,894 indigent patients. This amount of nearly four million dollars is actually greater than that paid for medical services by the Compensation Board in that Province during the same period.

May I refer at this point to the action of this Society in this matter of medical relief, when it was discussed at our annual meeting at Halifax in 1933. After considerable discussion in open meeting, without preliminary or subsequent committee consideration, our action was, "that the Medical Society of Nova Scotia give their sympathetic approval of this matter, and bring it to the attention of the Federal Government". Speaking to you as one born and bred in Nova Scotia, I ask you, could anything be more typically Nova Scotian than the above quoted resolution? Nothing so far as I am aware, has been heard or done in this Province concerning it since. May I ask—Is this matter of so little interest to us in Nova Scotia that at least continued study of it was not, and is not now, advisable?

Returning for a moment to the larger question of Health Insurance, a brief reference to the experience of the medical profession in British Columbia, no doubt known to you all in a general way, may be in order.

In this province, British Columbia, the initial steps toward Health Insurance were taken by the Provincial Government, beginning in 1919, and becoming definite in 1929, when a Royal Commission was appointed "to inquire into all matters affecting Maternity Benefits and Health Insurance". In 1932 this Royal Commission recommended "the early establishment in British Columbia of a suitable compulsory Health Insurance plan including Maternity Benefits." In 1935 a draft plan of Health Insurance was issued by the Provincial Secretary for study by the public, and public hearings were provided for. Up to this point the medical profession of the province, at least in its organized form, had not been consulted. From that day until this the profession in British Columbia has been engaged in the attempt to secure for itself and for the public, the benefits embodied in the principles formulated by the Canadian Medical Association in 1934, to which I have alluded above.

Despite all these efforts, an Act thoroughly unacceptable to the medical men, and to many of the public, was to have gone into operation on April 1st, 1936. A respite was gained, however, in the postponement in February of the Act *sine die.* This postponement was, doubtless, the result of the objections offered.

The present status of the Health Insurance scheme in British Columbia is that at the recent general election in that Province (on June 1st) a plebiscite on this question, "Are you in favour of a comprehensive Health Insurance plan, progressively applied?", was held. The people were also informed by the Government that "Those who may come within the scope of a Health Insurance measure must necessarily be those who make contributions thereto. The care and treatment of those unable to make any contributions is a separate question."

The result of this plebiscite was an overwhelming vote in the affirmative.

It would appear therefore, that, in British Columbia the medical profession still has before it a hard struggle, inasmuch as it is the apparent intention of the Government to exclude the indigent from the benefits of the Act.

I have referred to controversial matters in our sister Province, which in a sense are none of our business, because in another sense they are very much our business. Our medical brethren of the West Coast stand in exactly the same relation to the public as do we in Nova Scotia. Their present problems are our problems, or at least very possibly will become so in the near future. In any case they are entitled to our fraternal sympathy and help. Recognizing such obligations, the Canadian Medical Association at its annual meeting two weeks ago, voted the sum of one thousand dollars to the organized profession in British Columbia, as a contribution to the campaign for principles to which it, the Canadian Medical Association, had subscribed.

May I now ask another question—Are we in Nova Scotia so far removed from the troubles in British Columbia—are our conditions so different from theirs—is there so little likelihood of us having to face their present problems, that we can be content with a policy of *laissez faire* with regard to them?

I am not presuming at this time to say what final position this Society should take in these matters, but I am definitely suggesting that we should intensively study them, and that to this end we should set up a committee on Medical Economics, with provision for its actual meeting as often as may be necessary, and for its reporting to this Society and to other medical organizations in Canada on our behalf.

Gentlemen, these suggestions I leave with you. Do with them what you will. Irrespective of your action, I am sure that your desire coincides with mine, namely, that this Society should become of greater value to its members, and that in increasing degree it shall continue to be a free medical parliament for the formation and expression of medical opinion in Nova Scotia.

*The Training of a Surgeon

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IN order to plan intelligently the training of a surgeon one must first visualize the good qualities and the knowledge that must be possessed by an ideal surgeon. It is fully realized that not every surgeon can reach ideal status as the world only occasionally produces such men. But in order to "hitch our candle to a star", let us set up a few of the qualities that a paragon of surgeons would have. First, he must be intellectually, morally and in every other way honest with other people and with himself. Second, he must have great physical and mental vigor and unusually good manual dexterity. Third, he must be a hard worker, a continuous student and must be able to do good work even when he is tired. Further, he must be kindly, but firm in dealing with his patients. He must have initiative tempered with humility at his lack of knowledge and by good judgment. He must fully realize that science is never static, and never can be, and must ever be on guard against the complaisance that often becomes associated with superior accomplishment. He must have an uncanny ability to visualize the good in new knowledge and the bad in old. He should be a good teacher to his associates and colleagues and receptive to the knowledge of others. He should be able to record and present original observations and so help the progress of science. He should give a helping hand to all those with whom he has associations. Plenty of other qualities could be added to this partial list.

Of course no human being can at all times exhibit completely each of these qualities, but the closer he can approximate to them the better surgeon he will be. The American College of Surgeons has always striven to raise the standards of surgery and of surgeons to an ideal approaching the one described above. Its rules and actions bar any form of dishonesty among its members. Its requirements for membership set up definite standards of accomplishment. Its meetings and publications further the science of surgery and spread the knowledge of the best new developments. Many surgeons who in the aggregate do a great deal of surgery cannot meet one or more requirements for membership in the College. The problem of these men, which is a difficult one, will not be discussed further. At present it can only be met by education of the public.

Because of the good it can do them and the good they can do the College, the College has always accepted members from small communities who are only part time surgeons. These men are among the most useful members of the surgical community and it is hoped that they and their kind will always find a welcome place in the College. For the most part, however, such men never do and, admit themselves, never will be able to do the more difficult surgical procedures.

Dr. Samuel Harvey, the Professor of Surgery at Yale, recently, after a study of the subject made as chairman of a committee appointed by the

* Read before the sectional meeting of the American College of Surgeons, Hospital Conference, Halifax, May 20, 1937.

College, estimated that, in the United States, 600 new surgeons per year were needed to do the necessary difficult surgical operations that should be done and that must be done by highly trained men. To visualize this proposition on a smaller scale one can calculate that this would be equivalent to training three such men per year in or for the Province of Nova Scotia. He also estimated that there were not nearly enough good teaching residencies in the country of the type that could turn out such men. Where are they, then, to come from? There are two other possible sources. First, the time honored training achieved by assisting and by association with some older surgeon or group of surgeons who are doing good major surgery. Second, by starting only slightly or partially trained and learning further as he goes along. In any case it is a long and arduous path, and only the best individuals can hope to achieve their goal. The path is not only arduous, but it is expensive, both in money, and also to the health of the doctor in some cases, and to the health and lives of patients in many cases. This latter feature of surgical training (it also applies equally forcibly to medical training) is seldom discussed by the Anglo Saxon. The Chinese, however, have a proverb that goes something like this, "A doctor is never a safe one until he has killed his tenth patient." Dr. Pool, however, expresses the same thought in a less blunt way when he mentions the "ghastly mistakes" of poorly trained surgeons.

Our problem now resolves itself into deciding which of these methods, or what combination of them, will give the best results at the least expense in money and in health to the public. Before going on to this, however, one should face a smaller preliminary problem. That is, who should be allowed to take this expensive training?

The political philosophy in America (and by American I mean both the United States and Canada) has always been such that any young man should be allowed to go into any career of his own choice if he could by any proper means survive the necessary struggle to get a foothold in it. If we are, however, to supply the number and type of surgeon needed we must begin first with the right material. I know of the recent instance of a brilliant young man who had many of the necessary qualifications to make him the best possible material for development into a good surgeon. He had, however, one defect. His family had all died in early middle age from hypertension and his own blood pressure was over 200 systolic at the age of thirty. He completed almost ten years of full time hospital work in surgery in two of the best teaching hospitals. He had during the last two years of the training the very responsible position of resident surgeon in a hospital where the residency was similar in every way to that at the Johns Hopkins or the Peter Bent Brigham hospitals. He then had two years of work as an associate on the same hospital staff, continuing his teaching, his research and beginning to practice. Then he had a cerebral hemorrhage and died at the age of about thirty-six. Was this training worth while? On the other hand I know of another man, who when he first went into practice thirty years ago was assisting a very busy surgeon when he came down with active pulmonary tuberculosis. He changed his sleeping and eating habits, did not stop work, recovered and is now an important teacher of surgery in a great university. If a man's health is to be a factor in his continuance in a career of surgery many very difficult considerations will have to be evaluated. But weight should be given to it. I would venture to suggest that at yearly or at most two yearly intervals in our training of the ideal surgeon we insist on a physical check up of the man, and, hard as

it may be to do so, that we discourage the man whose physique will probably prevent his making use of his training. Such examinations should continue throughout life as they do in all good armies and as we recommend always to *our own patients.*

The mental side is also important although it cannot be handled in such a definite manner. There are possibilities, however, that aptitude tests and other psychological tests may be developed into something useful. At present such tests are used at entrance to college and to medical school, and seem to accomplish some useful results. In a very cautious manner, at first, purely on a fact finding basis such tests should be instituted at an early stage in our budding surgeon's career. (Perhaps at the end of his internship).

At each such recurring check-up further check should be made of the intellectual attainments and moral status of the young man. At present, there is some non-standardized check between internship and residency and before beginning an assistantship as there is competition for the positions that are considered best.

Now what intellectual training should have preceded his surgical training? First of course, graduation from a good medical school. We will not have time today to go further back in his career than that. Then a good internship, preferably in a teaching hospital. Dr. Pool, the President of the College believes strongly that there should be one year of medical internship before starting a surgical internship[1]. Opinion, however, is not unanimous on this point. I personally believe that an eighteen months to two years straight surgical internship, either with or without a previous medical one, is essential. I know of no rotating services that compare in usefulness of training to the best of the straight surgical ones.

The turning point in his career, however comes immediately after the internship and what his opportunities and accomplishments are in the next few years will make or break our young man, and in the aggregate will make or break our whole profession of surgery. Let us say that we are in a position to pick the 600 best men each year who have completed an adequate training up to this point. We will pick them particularly on the basis of character, knowledge, aptitude, courage, health and initiative as mentioned above. What will we do with them? Some few can be placed immediately in the existing good, graded, three to five year residences. Must the others find for themselves? The answer should be no.

I think there is very little doubt that a more efficient training, less costly in time to the young surgeon and in mistakes to the public, can be gained in a good organization than out of one, or by working with any but a handful of the best individual surgeons. As Pool has recently stated the number of good private assistantships has contracted markedly during the last twenty years. Lahey has shown that he can take promising material following the intern year and have the men handle extremely difficult surgical problems before they have reached the age of thirty-five. The Mayos and Crile and other outstanding leaders of private clinics have done the same thing.

If the best teaching hospitals and the best private clinics can teach the most difficult of surgery to a graduate of an interneship in about five to seven years why is there any problem at all? The answer is that all the other hospitals are not so organized or led that they can do it. In fact many hospitals of 200 bed capacity and up have so little surgical organization or leadership that both can be fairly said to be non-existant.

Now, it is admitted that more good men could be trained by the best hospitals, such as Hopkins, by shortening their residency from seven or five to three years. But the men, although fairly well trained, would not be as good as the fewer men now turned out. Also there would not, even then, be enough men trained. On the other hand, if the other large hospitals in communities of 100,000 and over, or drawing from surrounding population aggregating this number, were reorganized so that they could train men in a similar manner, the problem could be very easily met on a mathematical basis. On a social basis the problem is more difficult. The College is actually at work on this problem in continuation of its primary objective and is surveying all surgical residences with a view to learning which ones offer a training comparable to the best.

The present staff arrangements of many hospitals would have to be changed. Part time men would have to be reduced in number and services should be headed by surgical directors controlling from 100 to 300 beds each and giving half to full time to the hospital. Such services if properly headed and staffed could then attract and train competent men in a three to seven year period beyond internship to be actual masters of surgery.

It is very important that a part of this time, not less than nine months, and preferably a year, be spent in the laboratory, completely divorced from the clinic and the operating table. Some, whose tastes run that way, think that this time should be spent in pathology. Others that it be spent in review courses of advanced work in several of the fundamental sciences. I, personally, would object to the latter system very much, as it would tend to degenerate purely into another course of memorizing or of doing common technical procedures. A much better method would be to have the men go into any type of scientific laboratory to which their own interest leads them and to arrange for them there an opportunity to carry out or help carry out a definite piece of research. If a man were not particularly gifted in laboratory technique I would be broad minded enough to let him work in literary or even record room research during this time provided intelligent directors could be had to guide his efforts.

Thoughts such as have been expressed today are not particularly original, but have been working in the minds of many surgical leaders for some time. As a result of such thoughts and many informal discussions, it was finally decided to form a committee to study these matters. This committee was formed and did splendid work under the leadership of Evarts Graham of St. Louis. Representatives of the American College of Surgeons, the Surgical Section of the American Medical Association and of the American Surgical Association were on the original committee. They have recommended that an American Board of Surgery be formed for the purpose of certifying full time surgeons. This governing board has been formed and is beginning to go to work. It is composed of three representatives each of the American College, the Surgical Section of the American Medical Association, and the American Surgical Association. It also has one representative from each of the following regional surgical associations: New England, Southern, Western and Pacific Coast.

As I visualize the situation, this board will eventually certify a smaller number of surgeons than the number at present members of the American College. Mainly for the reason that a longer initial training, ability to perform well more elaborate surgical procedures *and full time work in surgery*

(as distinguished from surgery and general practice) will be required. This may be, at first, quite disturbing to many members of the College who cannot see how they will qualify. It should not be so. The part time surgeons are very important and useful men and the new board will never do them any harm at all.

But, in the long run, the good to surgery in general, that will derive from the work of the board will be partly an indirect one. When boards of trustees of hospitals with old and honorable traditions and commissioners of public hospitals dedicated to giving the best possible service to the public find that their surgical staffs are not so organized that they train surgeons in such a way that their graduates can easily pass the board's tests, then things will begin to happen and to happen, perhaps, quite suddenly.

A superficial consideration may lead to the belief that the production of well trained young men in large numbers will make things harder for the older men. But this is also nothing to fear. It has always been happening and always will happen in any case. In the long run the best thing for you and for me and for the public, is the thing that considered in the broadest possible manner, does most to elevate the standards and the performance of surgery.

Some of you have probably seen the organization plan and rules of the Board, as I have. I am going to go so far as to suggest that, in addition to their plans, which concern the moral, intellectual and technical training of the surgeon, that they go still further and consider also the somewhat less important qualities discussed above, especially physical and psychological.

The College in the meantime is tightening its own requirements for membership. For men graduating in 1938 a three year period of internship and residency will be necessary as part of the already existing 7 year training, as a minimum of time spent following graduation. The pressure on the hospitals to raise their standards is continuing. The post graduate training offered is multiplying many fold, and especially through sectional meetings such as this, is being made more easily available to more of its members in every way. The College is the live, important, up-to-date organization it has always been and was never more alive than it is now. I am positive it is going on to an even more useful future and that it will carry most of the burden in the work to help us reach the highest ideals which we can strive for.

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*"Post-operative Thrombosis and Embolism"

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IN dealing with this subject it is not my purpose to discuss the various theories of blood clotting; suffice it to say that in the light of very recent scientific investigations, it has been concluded that a thromboplastic substance in the nature of a proteinphospholipoid is the cause of the neutralization of the antithrombia and that this substance is not only contained in all cellular structures but the platelets of the blood constitute the immediate and probably the most important source. Such being the case, one may assume that if the platelets of the blood were materially decreased, the liklihood of thrombosis and embolism would be materially diminished.

I wish to stress this point because it seems to be the preponderant factor in a preventitive treatment which will be referred to later.

Post-operative thrombosis, and particularly embolism, has been a sad accident in the life of most surgeons. I think you have experienced to your sorrow the form of pulmonary embolism which is so rapidly fatal that any form of treatment is out of the question. This is one type in itself. In other cases, the second type, you breathe a sigh of relief when the embolus is so small that the victim mercifully escapes death without any special treatment. In the third group, the patient is in a desperate condition, still holding on to life when examined, but death follows in a matter of minutes or hours in spite of cardiac stimulants and oxygen. This type of patient, Trendelenburg sought to save by opening the pulmonary artery and removing the clots. His operation, condemned at first as unjustifiable by medical and surgical authorities, was continued by his pupils. Kerchner of Konigsberg performed the first successful operation in 1924. In 1927, A. W. Meyer of Berlin also reported that a total of seven patients had recovered after pulmonary embolectomy and I understand that several more successful cases have been reported subsequently. These reports should give renewed impetus to surgical enterprise as regards this type of pulmonary embolism.

The causes of post-operative thrombosis and embolism may be classified as—(a) predisposing and (b) direct. The former may be sub-classified into (a) predisposing preoperative; (b) predisposing operative; (c) predisposing post-operative.

The predisposing preoperative causes are, *firstly*, anatomical due to the crossing of the left iliac vein by the left iliac artery which, no doubt, is responsible for stasis; *secondly*, anemia; *thirdly*, chilling of the patient which might be due to splashing of the abdomen in pre-operative cleansing, the solution gravitating to the patient's back and dampening the draperies.

The predisposing operative causes may be (a) trauma of the tissues due to rough handling, either from the operator or from the too prolonged use of abdominal retractors; (b) long continued trendelenberg position. The pre-

* Delivered at the annual meeting of the Medical Society of Nova Scotia, Pictou Lodge, Pictou, N. S., July 7th, 1937

disposing post-operative causes alleged are "dehydration", too tightly applied abdominal binders causing venous stasis in the femoral veins and interference with the action of the diaphragm causing stasis in the lung circulation; prolonged liquid diet causing fermentation and abdominal distension; Fowler's position without active and passive motion of the limbs.

The direct causes are classified as:

(1) Infection, and

(2) Thrombopathic predisposition.

Considerable controversy wages amongst scientists regarding these direct causes but those who practise surgery to any extent know full well that scores of patients operated on, whether infected before or after operation, never develop thrombosis, and as for a thrombopathic disposition, practical surgeons ask, if such is the cause of thrombosis and embolism, why is it that a patient operated upon three times in succession only develops the condition on the third operation and not on the first?

With regard to practically all of the predisposing causes, surgeons, who have practised over a considerable number of years, realize that some or many or even all of these factors may be present and nevertheless, their patients do not develop thrombosis or embolism. Emergency operations have been performed on anaemic patients! Patients have been dehydrated! Rough handling has been present! and patients have been left still in bed and no post operative thrombosis and embolism have occurred.

With reference to the direct causes, Dr. George Bankoff, M.D., M.S., Honorary Surgeon to St. Joseph's Hospital, Manchester, England states that if trauma to the intima of a vessel causes thrombosis, that that damage can be conceivably caused by "a germ". Yet he cannot agree with the supporters of the germ theory that thrombosis is due only to infection because, as he states, there are many cases in which it is impossible to find any organism and he cannot accept the theory of the presence of a non-visable germ in these cases.

He emphatically states, in view of his experiments, that it is his opinion that thrombosis can never be regarded as due to one class of causes; but that it is a pathological state which can arise from different causes at any time the "equilibrium of the patient is destroyed". I shall return to his direct findings in regard to thrombosis in relation to the treatment of this condition.

On clinical grounds, thrombosis following pelvic operations is most common in the femoral and saphenous veins of the left leg. Such, however, with careful treatment very rarely gives rise to embolism. Autopsy studies reveal that pulmonary emboli usually originate in thrombosis of the pelvic veins, a condition which as a rule escapes clinical observation. It is more than probable that many obscure cases of fever during the second or third week of convalescence, are due to pelvic thrombosis which may never attract attention to itself until it terminates in pulmonary embolism; therefore, pulmonary embolism and infarction transcend all others so far as the surgeon is concerned. I might say here the frequency of pulmonary complications following abdominal operations is universally recognized. From an exhaustive consideration of the statistics from some of the best hospitals, it has been found that on every 30 to 50 patients operated upon, no matter what the anaesthetic, pulmonary complications have developed and one patient in every 150 to 175 dies from some such complication. However, the late Lord Moynihan in his excellent treatise on abdominal surgery, states that the approximate incidence of severe pulmon-

ary embolism is 1-1000. In approximately three thousand cases in my practice, I encountered three deaths following pulmonary embolism and six cases in which the embolus was small enough to pass through. It would appear, therefore, from the small incidence of pulmonary embolism as compared to the other more frequent thrombosis, that the structural organization is different apparently in the latter. Here the clot is so firmly attached to the vein wall that it cannot readily shift and in the former, the embolus is probably derived from a vein in which thrombosis has occurred from so slight a degree of inflammation as to leave the wall of the vessel almost intact and the clot very loosely attached.

With reference to treatment, efforts have been directed by attempting to eliminate the predisposing causes. Great stress has been laid upon the advisability of early passive and active movement and massage. Dr. Hoffman of Berlin claims that he has enormously cut down his mortality from pulmonary embolism by lifting his patients out of bed and standing them on their feet commencing the first day after operation. Dr. George Bancroft, in a paper recently read before the meeting of the American College of Surgeons in Halifax, claims good results from the intravenous injection of 10 c.c. of 10% solution of sodium thiosulphate given immediately after the onset of phlebitis. He claims that the phlebitis clears up very quickly but says it has no effect on embolism, and therefore I should like to stress the preventitive treatment of thrombosis and embolism as practised by Dr. George Bankoff of England.

Dr. Bankoff, after prolonged and involved experiments, has concluded that all persons are not liable to thrombosis and, judged by the fact that so many more patients escape thrombosis than those who contract it, notwithstanding that the latter are operated under the same conditions, it would appear that he is correct in his conclusion. I quote Dr. Bankoff as follows:

"I divide my patients into two groups, in the first and fortunately, the largest are the patients who can never suffer from thrombosis, even if the organs are damaged. In the second group, there will always be a risk without any external influence. In making my experiments, my intention was to find a means of detecting which patients can be affected and which cannot. I began to search for some agent which would produce definite symptoms enabling me to divide my patients into two groups; those predisposed and those immune and after careful experimentation, it was possible to demonstrate that by the hypodermic injection of Thyroxine, the reaction of each group is different. One group was thyroxine-sensitive; the other Thyroxine-negative."

In the sensitive group, the pulse is quickened, the temperature slightly raised, the red blood corpuscles slightly increased while the blood platelets are markedly decreased.

After two or three injections, the platelets reach their minimum limit and the blood coagulation time becomes longer. On the patient in the Thyroxine-sensitive group, the operation produces the same picture. In the Thyroxine-negative group, the injection produces no effects, except that sometimes a slight variation in the red corpuscles are seen.

The scientific explanation of the reaction to Thyroxine is expressed in different ways. Freund and Boshamer believe that the Thyroxine acts on the nervous system and at the same time, directly affects the cardio-vascular system producing the clinical symptoms in the picture. In the Thyroxine-resistant group of patients, the effects of the injection are almost unnoticeable because the systems mentioned show very little reaction. In this group of patients, the

parasympathetic nerve system predominates, thus facilitating the formation of thrombosis. Dr. Bankoff has experimented on two thousand patients admitted for operation, from 1931-34, and I have no doubt is still carrying on his work—and during this experimental period any case on other services in the hospital who developed thrombosis was examined and found to be Thyroxine-resistant confirming his opinion that only patients of this group were liable to thrombosis.

The treatment Dr. Bankoff found to be successful was the hypodermic injection of ephedrine gr. ¼ and atropine gr. 1/100, given on the fifth day after operation and repeated every alternate day until three doses were given in all.

The scientific explanation of the influence of these injections is as follows: six hours after the first injection, the blood platelets have dropped to 100,000 per C. CM. and the number of red cells is slightly increased; the platelets keep decreasing until the third injection, after which the same level is maintained.

In small hospitals where there is no laboratory, to carry out the test, Dr. Bankoff sees no reason why all patients operated on cannot be given this treatment. He says atropine and ephedrine can never be harmful to the patient and is even useful for the prevention of post-anaesthetic lung trouble.

Personally, I have used these injections on a series of 216 cases, mostly all of the major type. I use it in the minor operations also because I have a very vivid recollection of seeing a surgeon remove a small fibro-adenoma from the periphery of the left breast and, on the tenth day, the patient died of cerebral embolism. I should like to point out that I had a singular and annoying experience in connection with this treatment. Following a gastro-jejunostomy where the radicles of the gastro-epiploic veins were quite prominent, I inadvertently omitted to use the injections, although I fully intended to do so, and on the 10th day after operation, the patient had a good old fashioned pulmonary infarct in the base of the left lung. Fortunately, after a stormy convalescence, she recovered.

Summing up. The origin of thrombosis is not due to one group of conditions. It is rather a special pathological state due to influences such as constitutional predisposition, bacterial infection or toxemia. Not all patients are affected by thrombosis, but by the use of thyroxine, it is possible to classify them into two groups: those immune and those predisposed. I am of the opinion that faced as we are from time to time with the startling tragedy of pulmonary embolism, we might well ponder the words of Dr. Bankoff, viz: that not one of his patients out of several thousands treated with ephedrine and atropine have incurred thrombosis or embolism.

I trust, Gentlemen, that I have not wearied you in the presentation of a paper which was largely in the nature of a review of what you already knew but I felt that it might be helpful in specifically bringing to your attention the scientific findings of an eminent scientist and surgeon, findings which are now widely quoted not only in many reputable medical publications but also in some very excellent recent works on surgery.

*Empyema

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IN a study of the septic conditions which might affect the lungs and pleura one is immediately struck with the relative frequency of empyema as compared with other septic processes as lung abscess, pulmonary gangrene and bronchiectasis. It may be that there are certain conditions governed by locality, industrial accidents and geographic states which might play some part in the development of these latter diseases. But from observations at the Victoria General Hospital and the Halifax Infirmary it would seem that empyema is the commonest of the septic conditions. It is for this reason that we have chosen a discussion of this pathological state, when we were approached to discuss some common septic condition of the respiratory system. Each year as the "pneumonic seasons" come along we are sure to have our quota of empyema in the wards, and to see them in general practice. It is, then, a disease to be seen most frequently, and recognized by the general practitioner, without the aids of the laboratory and X-rays. Whereas the recognition of pulmonary abscess, gangrene, bronchiectasis and other septic lung states do, in the majority of cases, call for more highly specialized technique than are at the beck and call of the general practitioner.

Empyema is very occasionally a primary disease—this type is sometimes seen in children and may develop without any previous, or existing disease in the lung tissue. The majority of cases are secondary—so for practical purposes, empyema may be regarded as a secondary manifestation of disease in the lungs. Empyema may develop from a blood stream infection as in a septicaemia, or from a lymphatic spread through the diaphragmatic lymph channels; from a septic focus within the abdominal cavity, as from a perforated gastric or duodenal ulcer, a ruptured appendix, or other conditions giving rise to an acute peritonitis; and finally, from a septic focus within the chest wall itself, as from a puncture wound; osteomyelitis of the ribs and vertebrae, or acute infections within the breast. These three etiological factors are only incidental possibilities, and it will be found that in an overwhelming percentage of cases, empyema is a sequel of inflammation in the lung.

Having established the secondary nature of this pleural infection, there are two important types now to be considered. These two types are the distinguishing criteria upon which, not only the subsequent course of the disease, with its further complications, can be foretold, but they are also the determining factors in instituting proper treatment. In the first place, we must decide whether the empyema has developed after the pneumonic process in the lung has resolved and the lung has resumed its aerating function again. This is the so-called meta-pneumonic type, because it has developed after the pneumonia has subsided. In the second place, we must decide whether the empyema has developed along with the pneumonic process in the lungs, while it is still active and the air sacs and bronchioles in the lungs are the seat of inflammatory

* Delivered at the annual meeting of the Medical Society of Nova Scotia, Pictou Lodge, Pictou, N. S., July 7th, 1937.

changes. This is the so-called syn-pneumonic type, because it has developed along with the inflammatory changes in the lung. It is most important that this distinction be made, because it is really the type of infection which gives us the difference between the two groups. In the first group, we are dealing with a pneumococcal infection, and in the second it is the streptococcus which is giving rise to the trouble. The pneumococcal type is usually mild and the prognosis favorable, but in the streptococcal group the mortality rate is high not only because we have a virulent invader in the pleural cavity but also because there is present an active inflammatory process going on in the lung at the same time.

To deal more specifically with these two groups, the meta-pneumonic type is a sequel of lobar pneumonia. The patient has passed his crisis, temperature and pulse are normal, and all indications point to an uneventful convalescence. But after two or more days, the temperature becomes elevated and assumes a hectic type. Respirations are quickened. Dyspnoea and cyanosis appear. Frequently there is a distressing cough accompanied by some expectoration. There is pain in the chest of the affected side which may be aggravated by breathing, or may be of a dull aching type with a sense of fullness or constriction. Pallor develops, the appetite is lost again—in fact, there appears to be a recurrence of the symptoms of the initial condition present in the chest. But with the appearance of the above picture, one naturally thinks of an empyema and seldom is the diagnosis at fault. Coupled with these symptoms, there are rather distinctive signs. The chest movements are restricted on the affected side; vocal fremitus is gone. The percussion note, which may have been impaired during the resolving pneumonic process, now becomes dull or flat. There is a shift of the heart. The breath sounds are diminished or absent. There is a disappearance of the redux rales which were previously heard. Resonance and whispered pectoriquoy are absent, and not infrequently we may observe oedema of the overlying tissue with tenderness on palpation. The leucocyte count is high—between eighteen and thirty thousand. This completes a clinical picture which means an empyema is present in the pleural cavity—and it calls for a diagnostic procedure, namely, needling the pleural cavity to clinch the diagnosis. The pus obtained from such a puncture is thick, creamy, showing masses of fibrin and the pneumococcus is reported on the smears. It is well to keep in mind that sometimes the accumulation of pus may be loculated in some part of the thoracic cavity, and not infrequently, between the lobes of the lungs. The symptoms are the same, but the physical signs may be indefinite. The accumulated pus may be some distance from the chest wall—here a localized patch of dullness with bronchial breathing in a patient who has had pneumonia would certainly be most significant of the empyema. Needling the chest for the deep collections of pus may be dangerous and we should resort to the X-rays before attempting this procedure. There is one observation here worth making before we dismiss the diagnosis and that is the possibility of a recurring pneumonic process, either in the same lobe or elsewhere in the lung. It may come on within a few days of the crisis and complicate the picture, or it may be delayed well on into the convalescence. The symptoms are identical with the empyema picture but the physical signs are those of the pneumonic process with which we are familiar. I had the opportunity of studying such a case this winter, where the pneumonia recurred in the same lung three days after

the crisis. The picture here is fairly complete and we seldom have any difficulty with the diagnosis—but coming to the syn-pneumonic type, we see that the picture is more complicated.

* * * *

In the latter type of empyema the picture is complicated because of the underlying inflammatory changes in the lung. The pneumonia of the streptococcal type is more apt to be broncho-pneumonic, a lobular type—MacCallum has called it "interstitial broncho-pneumonia"—and it is characterized by a high mortality rate and the tendency for the development of empyema. The mode of onset is much like lobar pneumonia—the severe symptoms come on gradually. There may be a mild attack of "chest cold" of a few days duration—or a previous attack of measles. Still others are ushered in by influenza. The patients are seriously ill—always deeply cyanosed, with a distressing cough very often accompanied by bloody sputum—in contrast to the "rusty sputum" of the lobar pneumonia. Frank haemorrhages are common. The leucocyte count is high. The temperature chart is more apt to show a swinging type of temperature with marked changes rather than the sustained plateau of lobar pneumonia. The signs of pneumonia in the lungs are atypical, with patches of consolidation scattered throughout the lobes and coarse rales usually heard through both lungs. The clinical picture here is a grave one and though the physical signs in many cases are not typical of a pneumonia, yet no confusion should arise as the gravity of the case stamps the disease as one with far more toxaemia than is seen in an ordinary case of capillary bronchitis. This, then, is the type of case in which one may expect the syn-pneumonic type of empyema—because it is such a frequent complication. In one of Cole's series 36 of 46 patients developed it—the mortality rate in another series of Cole's cases was 43.3%.

The recognition of this type of empyema is not always an easy matter. As far as the physical signs are concerned, they may certainly be typical of an effusion, but with a very sick patient on our hands, we are not apt to give the posterior aspect of the chest a very minute examination. Certainly we should not have the patient sit up in bed, or even have him supported upright in bed, for our daily examination of the chest. In this way we are hampered, perhaps, in not being permitted to have a full examination of the lungs. But the apex beat is an excellent indicator of the pressure within the thoracic cage, and should there be any shift to the left or right we may well suspect the presence of an empyema. Tenderness on direct palpation along an intercostal space may be an indication, and we have noted oedema of the overlying tissues in cases that have not been sick very long. The symptoms may lead one to suspect an empyema. Increasing dyspnoea is a valuable sign. While it may mean more lung involvement, yet if coupled with cardiac shift, it is of strong diagnostic significance. In fact, during the course of a streptococcal pneumonia, should there be an increasing intensification of symptoms—the patient becoming more distressed, more dyspnoeic and complaining of constriction of the chest—we should be led to suspect the presence of an empyema. The X-ray—a portable unit—may not give us much help, because with a sick patient we cannot posture him properly and very often we do not get the fluid level but only a haziness about the chest which might be thickened pleura. But a diagnostic puncture of the pleural cavity can and should be carried out, when one suspects an effusion. This simple procedure clinches the diagnosis. The fluid obtained from an acute streptococcal empyema is

thin, watery and muco purulent. There is a predominance of the polymorphs and the streptococci are differentiated on the smear.

We have already mentioned unresolved pneumonia as a condition which may at times resemble empyema. But there is one other disease, namely, pulmonary abscess which deserves mention. When an interlobar collection of pus ruptures through to a bronchus and the contents are evacuated via the mouth, the diagnosis might well be confounded with that of abscess of the lung. The first point to be considered is the rarity of abscess as a complication of pneumonia. Lord states that the abscess of the lung occurs so frequently apart from pneumonia, that it is to be regarded as an independent condition rather than an accident of resolution. It occurs clinically in less than 1% and in slightly more than 2% of cases coming to autopsy. The commonest factor in the production of abscess is inhalation of infective material following operations on the upper respiratory tract, and of foreign bodies into the bronchial tree. So that a recent history of pneumonia would certainly favor the diagnosis of empyema rather than abscess. In favor of abscess there is the constant, distressing, productive cough which prevents rest, eating and is aggravated by posture, the expectoration of large quantities of foul smelling sputum and the fetor of the breath. The sputum contains elastic fibres which are indicative of lung destruction. The physical signs are localized within a lobe, there may be rales and occasionally a cavity may be detected, but more frequently the signs are not distinctive. Briefly then, it is the history which puts us on the right road to diagnosis. Empyema is seldom a difficult condition to diagnose but not infrequently we are at our wit's end to localize the collection of pus. In these cases we bring in the X-rays and have not only antero-posterior films but also lateral views of the chest.

In an untreated empyema the following conditions may arise:—

(a) Death due to exhaustion, toxaemia or some intercurrent infection. In these cases the pleura becomes more thickened, heart and mediastinum are shifted, the patient becoming more toxic with increasing loss of weight and appetite, increasing pallor, clubbing of the fingers and septic temperature. Occasionally the patient may do fairly well for a while but eventually signs of amyloid disease appear to terminate the disease.

(b) There may be gradual absorption of the pleural exudate with considerable thickening of the pleura. This leaves the patient with chronic adhesive pleuritis and a life, however long, of chronic invalidism with hampered cardiac and respiratory functions.

(c) The accumulated pus may rupture into a bronchus—as sometimes happens with an interlobar empyema—leaving the patient with a broncho-pleural fistula. Or the pus may rupture through the oesophagus or diaphragm —in the latter instance an acute peritonitis is set up.

(d) The pus may rupture through the parietal pleura and burrow beneath the subcutaneous tissues and form swellings underneath the skin of the chest wall the so-called empyema necessitas and the diagnosis may be confused with that of an aneurysm. The use of lipiodol injections into the tracts of such sinuses leads to a more interesting and instructive study of the origin of such a complication.

With the conclusion of these remarks we come to the treatment of empyema which is to be taken up by my surgical confrere. The distinction here is more for convenience of discussion, for we realize that the treatment of empyema is not purely surgical—in some cases it may be entirely medical, and in others, it demands the co-operation of both surgeon and internist to help the patient regain his health.

Acute Empyema*

VICTOR O. MADER, M.D., Halifax, N. S.

SINCE acute empyema is almost always a complication or a sequella of one or other of the diseases enumerated by my confrere, the responsibility of diagnosis belongs to the physician. But when the diagnosis of empyema has been made, the further conduct of the case largely belongs to the surgeon.

All cases of acute empyema do not require immediate surgical treatment. Early operation in certain types of empyema will mean disaster. In other cases delay may have equally serious results. The first and most important problem to solve in any case of empyema is whether or not surgical drainage is necessary, and if necessary, when the operation should be performed.

Clinically there are two great classes of acute empyema. In the one early operation is indicated. In the other early operation is contra-indicated, although surgical drainage is almost always required at a later date.

There are three criteria which will place any case of empyema in its proper class. The first is to be found in the history, the second in the physical examination, and the third in the character of the pus removed at aspiration and the bacteriological examination.

In the history or clinical course of the disease of which the empyema is a complication, it will be found that the empyema either followed or began during the course of this disease. From the physical examination it is usually possible to determine whether the empyema is localized or unlimited. The pus removed at aspiration will give the final clue to the type we are dealing with.

When the primary disease is a lobar pneumonia, when the signs and symptoms of empyema first appear after the pneumonia, when the physical signs point to a partial or localized empyema, and the pus is thick and greenish and contains pneumococci, the operation of thoracotomy and drainage may be proceeded with at once.

When the primary disease is a lobular pneumonia, when the symptoms and signs appear during the pneumonia, when the physical signs point to an unlimited or total empyema, and the pus is thick and grayish and contains streptococci, operation is at first definitely contra-indicated.

A brief reflection of physiological principles will demonstrate the reason why these clinical indications are correct. Empyema must not be regarded as a simple example of suppurative inflammation. It is an accumulation of pus in the only body cavity in which contact of the opposed serous surfaces and maintenance of negative pressure is necessary to normal performance of the respiratory function. It is true that a small opening in the chest wall is not incompatable with life. But loss of ventilating surface from the collapse may lead to cardiac embarrassment. Furthermore, the mobility of the mediast-

* Delivered at the annual meeting of the Medical Society of Nova Scotia, Pictou Lodge, Pictou, N. S., July 7th, 1937.

inum allows pressure to be transferred to the opposite hemi-thorax, in addition to the dangers induced by its own to-and-fro movements.

In these untoward factors lie the risks of an open pneumothorax in a large empyema where no adhesions have as yet formed to limit the accumulation of fluid, or to reduce the mobility of the mediastinum. Operation for the removal of pus, must therefore, be conducted in such a way as to avoid embarrassment of respiration. It must also provide for early restoration of the natural relationship of the elastic lung to the rigid thoracic wall.

The danger of an immediate radical thoracotomy in acute empyema involving the greater part of the plural space has long been appreciated. During the influenza epidemic of 1918, dyspnoea, cyanosis and death were frequently observed as immediate consequences of open thoracotomy performed for drainage of thin pus of the influenzal or streptococcal empyema.

It must be said that the same unhappy results may occasionally occur in too early drainage of a pneumococcal empyema. The guiding principle is to delay open drainage of the chest until the pus is thick, indicating stabilization of the mediastinum and the formation of visceroparietal pluraladhesions.

Needle aspiration not only confirms the presence of fluid but tells its nature and gives definite indications as to the lines on which treatment is to be initiated. On the one hand, there is danger of draining the pus too early; on the other, the danger of leaving a collection of pus too long shut up in the chest. The general principle is to evacuate thick pus at once and freely; to remove thin and infected fluid by repeated aspirations until the pus is thick and adhesions have formed, when a more effective form of surgical drainage can be instituted.

Exploratory puncture is a simple procedure, but several points should be borne in mind.

(1) The site of the exploratory aspiration should be at the centre of maximum dullness. Subject to this condition the lower and more posterior the puncture, the greater the help afforded the surgeon when he operates.

(2) The point at which the fluid is encountered should be carefully marked and the depth noted.

Treatment: The object of treatment is:

(1) Relief of intra-thoracic pressure.
(2) Reduction of toxaemia by evacuation of pus.
(3) Closure of the cavity.

To attain these ends the available methods are.

A. Intermittent closed drainage.
   Aspiration—with or without gas replacement.

B. Continuous closed drainage.
   (1) By intercostal tube.
   (2) By wide-bore tube after rib resection.
   (3) By thoracotomy followed by suture and separate closed drain.

C. Open drainage.
   (1) By wide tube after rib resection or thoracotomy.
   (2) By free opening with packing or tamponade.

Aspiration is the method of choice in cases of streptococcal empyema. During the operation a bout of coughing may interfere and care must be taken that the needle must not injure the lung during any violent respiratory movements. The introduction of a small quantity of air relieves distress and affords the only means by which a large collection can be evacuated at one sitting. The frequency with which aspiration is repeated depends on the rate of accumulation of the pus. After some time, ten days or even more the pus thickens and it is safe to assume that adhesions have formed, when it usually becomes necessary to obtain freer drainage by rib resection.

Intercostal drainage is effected by the introduction of a small catheter between the adjacent ribs by means of a trocar and cannula or small incision. The catheter should be flanged to prevent accidental withdrawal. It is connected with an air-tight system and with ordinary care will remain fitting closely for a week or ten days. When it works loose and allows leakage careful packing with dressings and strapping will make it air-tight again.

Rib resection is the commonest operation for empyema, but it is not to be regarded as essential in every case. It is merely a means of obtaining space for adequate drainage. The site of the opening is determined by the situation of the pus; the position of the patient in bed is visualised and the lowest point possible selected so that gravity can assist drainage to the utmost. A convenient site is usually found in the posterior axillary or the para-vertebral line about the 8th or 9th rib. Lower than this is not advisable lest the lung or diaphragm be injured. In children, owing to the greater height of the diaphragm, the 8th or even 7th rib should be selected.

The operation is best performed with the patient lying on the sound side with a pillow under the axilla to allow room for expansion of the healthy lung. A preliminary narcotic such as morphia and hyoscine is advisable so long as it does not banish the cough reflex. The skin is infiltrated with novocaine ($\frac{1}{2}$ to 1 per cent) along the line of the projected incision, which should be vertical or only slightly oblique. An incision of $2\frac{1}{2}$ to 4 inches in length is carried clearly down to the ribs. The intercostal nerves at the lower borders of the exposed ribs are infiltrated, as far back as possible, with 3 to 5 c.c. of 1 per cent novocaine. The lowest limit of pus is confirmed by aspiration. The periosteum of the selected rib is stripped from the outer surface with an elevator, care being taken to free the upper and lower borders cleanly and without tear, and the inner surface is then stripped with an encircling Doyen raspatory. A length of 2 to 4 inches ot rib is resected with bone shears which should leave an unsplintered, clean cut end to the rib. The welded layer of periosteum and pleura is gently incised and a certain amount of pus allowed to flow. The incision is cautiously lengthened along the rib bed and pus wells out and air is sucked in with each phase of respiration. The cavity is then explored with the gloved finger and all the flakes of lymph within reach loosened and if possible removed, while the extent of the cavity is also determined, and small thin adhesions broken down. At this stage, or before, coughing may be distressing, but is usually relived by plugging the wound with the fingers or by laying the hand flat over it. Coughing certainly helps to expell the pus, but the violent inspiratory efforts increase pulmonary retraction and should be discouraged. Should closure of the wound not relieve distress, oxygen should be administered under pressure. The ordinary gas-bag and mask are quite efficient, the mask being fitted tightly over the face and the bag distended with oxygen to its limits. After evacuation of most of the pus a large tube is in-

serted, such as the flanged tube designed by Tudor Edwards. The muscles are then sutured with cat-gut, pulling in their retracted margins with tissue forceps to bring them snugly around the tube; a few skin stitches complete the operation and the tube is clipped. With a close fitting dressing the junction is now air-tight, and on the patients return to bed the tube is attached to the suction apparatus. He should be placed in a sitting posture, propped up by pillows, and the tube must be kept free from all kinds of pressure.

Open drainage only differs the above rib resection by the omission of suction. If required, a larger opening can be made. Small and moderate-sized empyemata, especially those which are well established and may almost be considered chronic, undoubtly do well for a time with open drainage, but convalesence is always unduly prolonged and the cortex of the lung is often markedly fibrosed before the sinus is finally obliterated.

On the other hand, it must be admitted that many "closed" systems become "open" unless careful attention is paid to the skin tube junction.

In the post-operative care attention must be paid to diet, ventilation and good food. The use of respiratory exercises, such as blow-bottles, toy-balloons and musical instruments are of value. A mouth piece attached to a sphygmomanometer is useful for the same purpose.

Irrigation should never be used until or unless the empyema is showing a tendency to become chronic. Here, Dakin's solution or plain saline may be found useful. Irrigation should never be used in the presence of a broncho-pleural fistula.

Historical Section

Historical Background of the Nova Scotia Hospital, Dartmouth and the Victoria General Hospital, Halifax

MARGUERITE H. L. GRANT

(Continued from the June Bulletin)

The Establishment of the Victoria General Hospital

THE problems of the insane of the Province were now settled and as the need of a public hospital was still urgently felt, efforts were put forth to obtain this end. As in the case of the Nova Scotia Hospital, Dartmouth, the Victoria General Hospital, Halifax had its origin in the old workhouses of 1754 and 1758. An Act which was passed in 1759 for regulating the workhouse of 1758 provided for the care of the sick and weak as well as the idiots and insane, also for the orphan children who were to be admitted. Several surgeons were appointed until 1787 when one only was to attend as surgeon and dispensing physician. This monopoly of the Poor House hospital led to the *petition in 1832 by several doctors for a public hospital and medical school and was followed by others of which the next most important was that presented to the House of Assembly in 1840 by Dr. Hume and several practitioners, also by many citizens. In this, as in the previous one, aid was requested for a public hospital open to the medical men and their students. The petition is as follows:

"To the Honourable the House of Assembly of the Province of Nova Scotia.
The petition of the medical practitioners and of the Inhabitants of Halifax in general
Respectfully sheweth

That while there is hardly a metropolis in Europe or on the Continent of America, in which there are not one or more Hospitals established for the exclusive reception of the sick and where all the necessary means for their recovery are amply supplied; yet there is in Halifax no similar Institution to which the people of the province may resort when assailed by disease in any of its various forms.

That owing to the growing importance of this Town in a commercial point of view; to the increase of population throughout the province and to a corresponding increase in the number of the various classes of operatives, it is the opinion of your petitioners that an Hospital for the purpose above specified, promises to be of the first importance to this province and is therefore indispensable to the respectability of this community especially.

That the Medical Practitioners who have the best opportunities of being correctly informed on this subject from their witnessing daily the hardships to which many of the Inhabitants are exposed in time of sickness, held a meeting some time since, at which it was resolved

* Note: See Bulletin, May, 1937.

"That an Hospital which should have reference both to Town and Country is highly requisite in this place and also that suitable means be used for carrying this object into effect."

It is known to your Petitioners also and has long been a matter of deep concern to them, that among Labourers, Tradesmen, Domestic Servants and Sailors, certain important cases are constantly presenting themselves, such as fevers and other acute diseases, accidents, etc., which require immediate and active treatment and the frequent attendance of the physician in person, but which nevertheless receive no adequate assistance, owing to the inability of the sufferers to procure the means requisite for their recovery and thus many poor but decent families are exposed to severe hardships, and even bereavements, which an Hospital might in many cases be the means of averting.

Throughout the Province also, there are many persons affected with a variety of surgical diseases, which might be cured by timely and proper treatment, but no opportunity being afforded of having their complaints removed at a moderate expense and under promising and comfortable circumstances, they are doomed to a life of mortification and suffering or are compelled to seek in other countries that relief which, for want of a proper Institution, cannot be obtained in this.

Your Petitioners are further aware that there are many respectable families, who, if a Hospital were established on such a footing, as that on becoming an Inmate of it, no degradation were implied, would gladly embrace the advantages it would offer in behalf, not of their servants only, but of their relatives occasionally when afflicted with any peculiar sickness or disease, requiring more attention than their strength of circumstances could sustain.

You Petitioners in conclusion, respectfully state that they indulge the strongest contemplations in respect to the advantage which would result to the Province at large from the Endowment of an Hospital as in their humble opinion, it would lead to correct and uniform system of practice suited to the peculiar modification of Disease in this Climate; it would greatly facilitate the progress of Medical Science, throughout the Province and in short by the Formation of a system of Medical Police, than which your Petitioners are bold to say there is not existing a greater desideration in Nova Scotia, inasmuch as they are not aware of any place or province of equal Importance within Her Majesty's Dominion where this essential to good Government is so imperfectly recognised.

Your Petitioners therefore respectfully but earnestly pray that an Hospital may be established forthwith, in Halifax, for the special and exclusive benefit of the sick, both of the Capital and of the Province generally and that to this end, such Legislative aid may be granted as in your Wisdom you may deem expedient."

And your Petitioners, as in duty bound, will ever pray

J. T. HUME, M.D.,
WILLIAM GRIGOR, (Surgeon),
FREDERICK W. MORRIS, M.D.,
ALEXANDER F. SAWERS, M.D.,
T. B. DESBRISAY, M.D.,
RUFUS S. BLACK, M.D.,
JAMES C. HUME, M.D.,
MATT. HOFFMAN, (Surgeon),
THOMAS STIRLING, (Surgeon),
CHARLES CREED, (Surgeon),
JAMES F. AVERY, M.D.,
WILLIAM J. ALMON, M.D.,
CHARLES COGSWELL, M.D.

One hundred and fifty-seven leading citizens also signed the petition, which was referred to a select committee—Mr. Bell, Mr. Young, Mr. Howe, Mr. Forrester, Mr. Morton, Mr. Chipman and Mr. Smith.

These gentlemen reported as follows:

The Committee to whom was referred the petition of Dr. Hume and other medical practitioners for the erection of a public hospital beg leave to report that the circumstances, the population and the trade of the country are such as to require some Institution of the kind recommended by the practitioners—that there is almost utter destitution of any

(See Manuscripts of General Assembly 1838-41.)

such establishment, into which persons, above the situation of pauperism or vagrancy, can be received—there being at present no other place but the Poor House, and even that is so crowded that its present inmates cannot receive all the assistance which a due regard to the sufferings of our common nature, though in the humblest ranks of society require; and the Committee are of the opinion that there is not perhaps in Europe or America a town of the same magnitude as Halifax, that is not provided with some such Institution. In Saint John, N. B., there is a seaman's hospital, founded and supported in the first instance by grants from the Provincial Legislature, and afterwards supported by a tax on the Tonnage of Vessels, which the Committee are informed has nearly refunded the amount advanced by the Legislature. In New York a similar Institution has had large grants from the public funds, and in 1816 an Act was passed granting to the Hospital the yearly sum of $10,000 until the year 1857.

The utility of such an Establishment would in the opinion of the Committee be great—persons from all parts of the province, who could not, in many cases, receive the medical aid and attention necessary, might there be accommodated and have the advantage of the united skill of the best surgical and medical practitioners. For Seamen, Travellers and Strangers it seems almost indispensable—and the want of it in a Seaport Town of our population and trade, is perhaps discreditable—and as it is the design and intention of the petitioners that the Institution should be open and free for all of the medical profession, who are duly qualified or in training so to be, advantages will result therefrom for the increase and extension of that skill so intimately connected with the health and lives of the community.

The Committee as far as can judge from the information obtained by them are of opinion that a sum not less than £2000 to £3000 would be necessary to erect a building suitable to commence such an Establishment, which might be so constituted as to admit of enlargement at some future period, and the sum might be drawn at different times as the work advanced.

The Committee deem the object worthy the attention of the Legislature, and should the House adopt it, would recommend that a Bill be passed for carrying the measure into effect. All of which is respectfully submitted.

H. BELL, Chairman.

In March, 1840 the Honourable Mr. DeWolfe by command of His Excellency the Lieutenant-Governor presented a paper containing an explanation in relation to the proposed Hospital—a pamphlet was also produced containing the Charter of the Society of the New York Hospital granted by His late Majesty George III in 1771 with the By-Laws and Regulations of that Institution.

The following summary was also drawn up for the information of the Legislature by a number of merchants and medical men who were interested in this public hospital.

HOSPITAL

Proposed site—somewhere near Pyke's Bridge (this bridge crossed South Park Street near the intersection of Spring Garden Road, before this it was known as Stayner's Bridge where a brook used to flow down South Park Street) with about three acres of ground attached—say of that assigned to the Horticultural Society, if it can be obtained as it is not now in use.

The building to contain 120 patients; the number in Hospital, at a time throughout the year, will probably average seventy or eighty, and one-fourth of those seamen. The expense of raising a suitable building will be Two Thousand Five Hundred Pounds. The general support of the Establishment, as nearly as can be calculated, will cost Fifteen Hundred Pounds, which may be partly raised by a tax on Shipping of 1½d per ton on every vessel over forty tons—by pay patients, by fees from medical students—by parochial contributions—by annual subscriptions from individuals, etc., etc.

The Hospital, in respect to funds, medical attendance and general management, to be under Control of the Governor. Annexed is a pamphlet containing a Charter from George the Third, for incorporating the Society of the Hospital in the City of New York, which may serve further as a guide to the Legislature, with respect to the object now sought.

MATTHIAS HOFFMAN,
JAMES F. AVERY,
WILLIAM GRIGOR,
J. C. HUME,
JOSEPH STARR,
MICHAEL TOBIN (JR),
GEORGE P. LAWSON,
EDWARD KENNY,
JAMES MCNAB.

In March, 1841 the Honourable Mr. Uniacke presented a plan and estimates for the erection of a public hospital.

However, for the next few years it appears that no definite decision had been made to erect the hospital. In the petition of the Mayor of Halifax and others, which was presented in 1845, it was seen that the promoters of a general hospital had now become divided, the majority having been in favour of a separate hospital for the insane, only twelve of the seventy-three subscribers donating sums for a general hospital.*

This petition was followed by one from the members of the Halifax Medical Society (incorporated 1861) and was presented to the House on February 2nd, 1846 by Mr. McNab. This petition which follows is similar to those of 1832 and 1840 when requests were made for a hospital especially open to the doctors and their students, also for a dispensary, and it is one of the most interesting of the requests which finally led to the establishment of the Victoria General Hospital.

To the Honourable House of Assembly now in Session, the petition of the undersigned members of the Halifax Medical Society

Respectfully sheweth

That your Petitioners have for some time past had under their consideration the expediency of establishing a Public Hospital in this City with a visiting dispensary attached thereto for the purpose of providing for the care and cure of poor and destitute sick persons.

That at present there does not exist in this Province any establishment adapted for this purpose as the regulations of the Poor House necessarily prevent the admission of persons labouring under fevers and other infectious disorders.

That there exists in this city a large class of poor persons who are unable to provide the care and comforts absolutely indispensable for those in ill health, and although your Petitioners are always ready to devote their services to the assistance of the destitute poor their last efforts are often rendered unavailing by the absence of comfortable dwellings, personal cleanliness, and by other evils generally attendant upon poverty and destitution.

That these disadvantages are peculiarly insuperable in the case of a large class of persons, namely, the merchant seamen who are frequently subjected to lamentable misery and wretchedness for the want of such an Institution. And your Petitioners respectfully venture to assert that the apathy and disregard hitherto evinced on this subject is discreditable to the City and Province, and they are well assured that no city in the civilized world of the size of Halifax or of equal importance, either in a commercial or political point of view is without such an Institution as that which your Petitioners desire.

Your Petitioners therefore appeal to the Humanity of your Honourable House and respectfully pray that your Honourable House may take the subject under your grace and serious consideration and also take such steps as may be necessary to carry out an object so essential to the comfort of the poor and distressed sick, and to remove the reproach which rests upon our City and Province for the want of such an Institution. And

* (Note: See Development of Nova Scotia Hospital, Dartmouth, in Bulletin, June, 1937).

your Petitioners will be prepared to produce evidence to your Honourable House or a Committee thereof in support of the above statements, and will be ready to shew to your Honourable House that in addition to the advantages already enumerated there are many poor sick persons throughout the Province who are very burthensome both to the Provincial Treasury and to the various Counties and who could be much better provided for in a public Hospital and at less expense than under the present system.
And your Petitioners will ever pray, etc."

Halifax, January 29th, 1846.

J. T. HUME, M.D.,
MATTHIAS HOFFMAN, M.D.,
JAMES AVERY, M.D.,
WILLIAM GRIGOR, Surg.,
ALEXR F. SAWERS, M.D.,
JAMES C. HUME, M.D.,
RUFUS BLACK, M.D.,
THOMAS J. STIRLING, Surg.,
D. M. PARKER, M.D.,
JAMES ALLEN, M.D.,
FREDK. W. MORRIS, M.D.,
JAMES R. DEWOLF, M.D.,
ED. JENNINGS, M.D.,
WILLIAM J. ALMON, M.D.

The petition was referred to a select committee composed of Mr. A. M. Uniacke, Mr. Desbarres and Mr. Huntingdon for examination and report.

The Committee to whom was referred the Memorial of the Medical Society for the City of Halifax beg leave to report as follows:

That your Committee have given their best attention to the subject, and are impressed with the conviction that there exists a strong necessity for the formation of a General Hospital. This opinion your Committee have been induced to adopt from investigation and the information kindly afforded then by the Chairman and gentlemen composing a deputation of the Medical Board.

The first point your Committee directed their attention to was to enquire how many persons stood in need of medical treatment amongst that class who were likely to become inmates of the Hospital sought for in the Memorial, and from the information submitted to them conceive that to render it in any degree efficient it would require to be constructed to contain one hundred beds, besides accommodation for the attendants, as the number of persons who through the year would probably seek aid and obtain admission thereto, as far as can be ascertained, average about 300—that the class of individuals would mostly range amongst those employed in the navigation of the Province and in the middle station of society, there being afforded by the present existing Poor Asylum every accommodation for the more indigent portion of the population.

The second point your Committee directed their enquiry to, was the probable expense that would be necessary to incur, in order to erect a suitable and sufficiently commodious dwelling, and to carry out the object desired, and in reporting upon this branch of the subject your Committee are again indebted to the information laid before them by the Chairman of the Deputation, who submitted for their consideration various estimates with a plan, whereby it appears that a neat and suitable lodging could be erected exclusive of the cost of the land, for about the sum of four thousand pounds, and that a further sum of five hundred pounds would be required to furnish and equip it with the articles necessary for the comfort and accommodation of the inmates.

And your Committee would here remark that whenever it is deemed expedient to commence the erection of the General Hospital, that care and attention should be bestowed on the selection of the site, being convinced that it requires a cheerful and airy situation, with a sufficient quantity of land varying from five to not less than two acres of land, which, while it could be used as a garden, to the establishment, would greatly tend to invigorate and restore to health the inmates by affording them sufficient space for exercise and amusement. It is also most essential that it should be placed if possible in the vicinity of a running stream of water, which could not only increase the cleanliness so conducive to health, but render the grounds ornamental and picturesque.

The third and most material point which required the attention of your Committee was the mode in which the Hospital was hereafter to be supported, and the Committee

again have to refer to the information laid before them by the medical gentlemen who attended. It appears from their evidence that the expense for the support of a Hospital calculated to accommodate one hundred inmates, with the necessary nurses, attendants, medicine and support of the individuals, while these would amount to fifteen hundred pounds annually, or at the rate of one shilling per day for each person—and the following was the plan submitted for the consideration of your Committee—That a tax of one penny per ton should be levied off all shipping entered at the Custom House, which sum should be paid over in each year—this tax to be paid by all vessels exceeding sixty tons burden—and that the balance should be made up by an annual grant from this Legislature, and an assessment upon the City of Halifax. That the sum likely to be obtained from the tax of a penny a ton, would realize about three hundred pounds a year, leaving the remaining sum of one thousand two hundred pounds to be raised as before stated.

Your Committee waited upon the Mayor of this City, and requested he would ascertain the views of the authorities upon a subject likely to effect the interest of the citizens to the extent referred to, and from him received a communication informing your Committee that the impression upon the minds of the Civic Body was, that they could not at the present time recommend the levying of an assessment amounting to so large a sum as even a third of the balance required, though he acquiesced in the necessity of the urgent call that existed for the establishment of a General Hospital.

Your Committee have deemed it their duty thus fully to report all the information they have been able to attain on a subject of so much importance. The founding of the Hospitals where those afflicted with disease and sickness can obtain relief has been an object which has received the serious consideration both of the Legislature of Canada and the neighbouring Province of New Brunswick. In Canada three hospitals on an extended scale have been established, and within the last few years one has been brought into successful operation in the City of St. John's. The increasing population of our own Province, and the calls that are made from time to time for an extended accommodation for the distressed and suffering, cannot but urge upon the minds of those who have the public interests in charge, the necessity there exists for an establishment where beneficial results will be reaped by a large proportion of our afflicted fellow beings."

ANDREW M. UNIACKE,
W. F. DESBARRES,
HT. HUNTINGDON.

The typhus epidemic of 1847 found the town unprepared to meet the emergency—requests were made for admissions to the hospital of the Poor House as during the cholera outbreak in 1834, but the commissioners were obliged to refuse for they had not sufficient accommodation and could not incur the risk of communicating the disease to the inmates of the institution. The need also of a hospital for immigrants was greatly felt and in December 1847 the health officers drew attention to the fact that there was no public hospital, the necessity of which was lamentably proved during the last summer —"scores of immigrants affected with typhus and no public building for their reception". During the various epidemics from 1815 to 1859 temporary hospitals were established at Halifax and at Dartmouth.

In 1849 Halifax was still without the benefits of a public hospital and a movement was again set on foot to establish such an institution. A Committee was appointed to suggest a plan and propose a draft of constitution and rules, and "it was the Committee known as the Centenary that took the first practical steps to have a public hospital established in the City." In 1855 Dr. Jennings made an appeal for a hospital, or a new dispensary, or both. He stated:

"Can you find in the extensive Province of Nova Scotia a medical institution dedicated exclusively to the sick.—the Legislature granted £50 a year to the Halifax Dispensary,

about £25 of which is expended on house-rent, fuel, etc. What becomes of the remainder. Divided into 3000 shares—nearly this number of patients said to be registered in the books. The rest we have of medicines for our patients for the year. There is a field for the homeopathics—where he will serve enough to kill by giving too much. It is not my desire to throw a slur on the Dispensary, but to point out how useless it must be either as a school of medicine or for the purpose for which it was originally designed. It is necessary to state that perhaps hundreds at this present moment, whom a disease (scarlet fever) of the most malignant character has prostrated, would receive with gladness the relief such an institution would afford."

An old dispensary had been carried on since 1829 and now requests were being made for another.

In 1855 the City Council had passed a resolution proposing to let that part of the South Common bounded on the east by South Park Street and on the west by Robie Street for the use of the city for building and repairing the streets, but objections were raised as the City Council had also applied for an Act to enable them to build a hospital there.

The Act which was passed in that year authorized them to build a hospital on any lands belonging to the city, or which the city could procure or purchase, or as a gift for that purpose, the Act also empowered them to issue bonds not exceeding £5,000 for hospital purposes. This was the nucleus of what today constitutes the Victoria General Hospital and the location was then a barren dotted with gravel pits from which material had been taken for the streets. This location has an historical interest as it was in front of the hospital about where the old flag pole stood that the execution took place on July 30th 1844, of mutineers of the ship "Saladin". This ship was wrecked at Country Harbour, Guysborough County and six prisoners were brought to Halifax and placed in the new penitentiary on the North West Arm. Four of these, Jones, Hazelton, Anderson and Johnstone were conveyed to this spot where they were hanged and their bodies buried about where Summer and College Streets intersect. It is said iron bars were thrust through the coffins into the bodies and left there for some time.

In 1857 the contract for the hospital was given to William Davis for £9,035 and the amount was supplemented in the following year by £4,500.

The following from the Acadian Recorder of July 25th. 1857 gives interesting views on the subject.

"CITY HOSPITAL—it is now decided that this much required edifice is to be erected forthwith. At the City Council on Tuesday last, it was resolved to accept and act upon Mr. Robert Davis' tender for building the Hospital, the amount was £9,075. This we are told includes everything to complete the building 'even up to stoves and stove pipes'. A central spot upon the 'South Common' is the site chosen for the new Hospital. It is rather to be wondered at, that the 'City Fathers', in their intense admiration of the many natural picturesque beauties of that fine public square, would suffer them to be marred, by any mere architectural effects, even although bestowed on an edifice so much needed as a City Hospital. We thought that the Common, in all its natural—or unnatural—nakedness, with its chaotic quarries, irregular but picturesque pyramids of stone, profound mud holes, expansive duck ponds, and acres of beautiful rich red and brown earth, without a blade to mar the view except when a City Councillor took an occasional walk out that way—we thought that the South Common, just as it lay, was to the Councillors as the apple of their eye. The citizens should give them credit for much sacrifice of feeling in having decided to locate the hospital there."

Further notes from the Acadian Recorder, June, 1858 report on the hospital.

"It is said in well informed circles that the erection of the City Hospital on the South Common is progressing satisfactorily."

"Mr. Gordon, the architect, requested a competent mason to oversee the work of the City Hospital provided they did not pay him more than ten shillings a day. The complaint was general relative to the bad work of the building. Mr. Augustus Wright was appointed."

"The Committee of the City Hospital expressed their regret that, in consequence of observations made by members of the Council, Mr. Gordon felt it his duty to tender his resignation. Whereupon the Committee of the City Hospital was empowered to obtain an architect to superintend the building."

'The Corporation have succeeded in opening a cash credit with the Bank of Nova Scotia to the extent of £5,700 for the purpose of continuing the erection of the City Hospital and prison."

The brick centre of the main building was completed in 1859 and was designed to accommodate about thirty-five patients. It was a two-storey edifice with two short wings on the north and south sides, the front of the original building projecting only a short distance in front of the wings, the present entrance having been extended forward sometime later. The equipment was very meagre most of which, after the reopening of the hospital in 1867, was found to be useless.

In front of the building there was a hut where the watchman was stationed; it was his duty to prevent all unauthorized persons entering or leaving the grounds.

In March, 1859 at the sixth annual meeting of the Medical Society, at the Halifax Visiting Dispensary, a committee was appointed to draw up suggestions for the management of the new hospital on the South Common. There were present Drs. Black, Almon, Hume, Gilpin, Jennings, Mitchell, Morris, Parker, Gossip, Farrish and Slayter.

A minute of Council concerning the management of the City Hospital was read, when it was moved by Dr. Parker and seconded by Dr. Gilpin that the medical attendants at the City Hospital be paid for their services, to which the following amendment was proposed by Dr. Jennings—That the medical men give their attendance to the City Hospital gratuitously. The amendment not being seconded could not be put, and the original resolution passed in the affirmative—all the members present voting in its favour, Dr. Jennings only against it.

It was moved by Dr. Almon, seconded by Dr. Parker, that four medical men be appointed as attendants for each year eligible for re-election, to which Dr. Slayter moved in amendment that the term for attendance be limited to six months, and that all the medical men in the city be appointed in rotation —the amendment having been seconded by Dr. Jennings was put and negatived, whereupon the original resolution passed in the affirmative.

It was moved by Dr. Parker and seconded by Dr. Almon that a qualified person be appointed to act as house-surgeon and apothecary at a salary of not less than £100 per annum exclusive of board, lodging, etc., to which an amendment was proposed by Dr. Jennings to the effect that the party appointed as house-surgeon should also act in the capacity of City Health Officer, and be paid a salary of £150 per annum.

The amendment not having been seconded the original resolution was put and passed in the affirmative, all the members present, except Dr. Jennings, voted for it.

It was moved by Dr. Parker and seconded by Dr. Gilpin that two wards of the hospital be set apart for the reception of patients having contagious diseases, under the control of the city medical officer and that one or more wards be appropriated to paying patients. The motion was passed.

It was moved by Dr. Jennings and seconded by Dr. Slayter that all medical students be permitted to attend the hospital gratis during visiting hours. The motion passed unanimously.

It was moved by Dr. Almon and seconded by Dr. Mitchell that a committee be appointed to confer with the hospital committee appointed by the city relative to the resolutions which were passed in the affirmative. Drs. Black, Jennings, Gossip, Parker and Slayter were appointed a committee for that purpose.

The hospital had not been in operation very long before difficulties arose and criticisms were made of the heating which was by stoves; the water and gas supplies were defective and the organization and management were unsatisfactory.

It was evident that no provision had been made for the current cost, which was partly paid by fees from sailors, by private patients and by public appeal. As a result of these conditions the institution was a failure being practically idle from about 1860 to 1866 except a portion of it which was used for infectious diseases—in a report of the Medical Society 1861 it is recorded that a case of varioloid was sent to *the hospital*, small-pox being prevalent at that time—other parts of the hospital were used by the military for various purposes. However, as Halifax was an important immigration port the need for such an institution was keenly felt also for an immigration hospital for which requests were now being made and efforts were renewed to re-establish the hospital and to erect the new Poor House.

The hospital, which was originally a strictly city institution and managed by a committee appointed by the city until 1865 was now to become a city and provincial one and to be placed under the Commissioners of the Poor who were incorporated in 1846.

In 1867 it was resolved that the Commissioners of the Hospital and the Poor House be directed to proceed with the re-establishment of the hospital and the building of the new poor house; that two-thirds of the cost be paid by the Government and that Legislative provision be made to enable the city authorities to assess the town for the remaining one-third. An Act was passed to provide twenty thousand dollars for the erection of the new poor house and for the necessary repairs to the City Hospital and from that time the establishment began to function as the City and Provincial Hospital. In that year 227 patients were admitted.

In 1868 the sum granted was found to be insufficient and an additional amount of ten thousand dollars was to be raised by the City Council. Again in 1869 an Act was passed to authorize a provincial loan of twenty thousand dollars to complete the poor house then in the course of erection in the west end of the city. This poor house building was completed about 1869; it was a massive castle-like structure of several stories. On the original plan by the architect Stirling, there was a wing in the front on the eastern end but this was not included in the edifice. In 1882 this new poor house was destroyed by fire and the present building erected on the old site on South Street as an asylum for the poor. Sometime after this the old buildings on Spring Garden Road were torn down, the burying ground filled in and trees planted to

become Grafton Park. The lots were sold for $20,066.00 which was used towards the construction of this city home and the repairs to the City Hospital.

It was seen that as far back as 1832 a request was made for a medical school combined with the hospital—this school was founded in 1868 and in 1873 an Act was passed to incorporate it under the name of the "Halifax School of Medicine."

A report of 1876 states "that the City and Provincial Hospital was a building not half the required size—it catered to only 60 beds when at least 150 would be necessary". The report also referred to the new poor house which was erected in the same vicinity and to the medical college, a neat wooden building not far away which was founded in 1868 with an enrolment of twenty medical students.

Since 1867 the hospital and poor house were managed by a Board of Commissioners which was abolished in 1878 when they were placed together with Mount Hope under the Board of Public Charities, in which both the City and Province were represented, the Honourable Minister of Public Works and Mines being Chairman. This continued until 1886 when the hospital was taken over by the Government and in 1887 it was rededicated in honour of Queen Victoria's Golden Jubilee and called the Victoria General Hospital. Since then the Hospital has been enlarged, wings added to the original ones and a pavilion erected at the southern end. History repeats for today requests are being made for a new and better hospital.

The Nova Scotia Medical Bulletin

Official Organ of The Medical Society of Nova Scotia.

Published on the 5th of each month and mailed to all physicians and hospitals in Nova Scotia. Advertising forms close on the 15th of the preceding month. All Mss should be in the hands of The Business Editor on or before the 10th of the month. Subscription Price:—$3.00 per year.

VOL. XV. JULY, 1937 No. 7

DALHOUSIE REFRESHER COURSE IN MEDICINE

THIS annual post-graduate week under the auspices of the Faculty of Medicine, Dalhousie University, was inaugurated in 1922—(the Jubilee oear of the first graduating class in medicine). In reporting the proceedings Dr. A. G. Nicholls—at that time professor of pathology and a member of the original committee—referred to the Course as an "encouraging venture" and "an event of more than passing importance in the medical annals of this province". Dr. Luther MacKenzie of New York when taking part in one of the earlier courses said in substance, Dalhousie is not satisfied with merely graduating her students, but in these yearly gatherings seeks to continue to serve them throughout their professional life—in which service she is, he believed, quite unique.

Various schemes were tried, one year this, another year that, until now a great fund of practical experience has been accumulated. The course is planned to serve the interests of those engaged in every day general practice. Although the great bulk of the work falls upon the Faculty members, yet the guest teachers are a very important element in these courses. Uninfluenced by national or racial prejudice the Refresher Course Committee makes every effort from year to year to secure the most able instructors.

The sixteenth Refresher Course will be held from August 30th to September 3rd. One would have believed that during the years nearly every variation in teaching had been tried and its value determined. Not so: our present energetic chairman has conceived of something quite different in so far as a time table is concerned, and yet quite familiar in practice. At almost every medical gathering, as much is learned around the dining table or when room mates exchange views and experiences, as in the class rooms listening to formal presentations. It is the intention to have that very kind of a free and easy discussion on the general subject of treatment Friday afternoon. If each one brings a problem the success of this round table conference is assured.

This year the guest teachers will be up to the high standard of former years. Dr. Richard A. Kern, Professor of Clinical Medicine, University of

Pennsylvania, will speak on "Clinical Allergy" and "Duodenal Ulcer". Dr. Kern is head of the General Medical Out-patient Department, University Hospital, an excellent speaker and teacher with wide general medical interests in addition to his specialized knowledge in the field of allergy.

Dr. Howard A. Clute of Boston will deal with "The Management of certain Abdominal Emergencies" and "Reducing the Mortality in Acute Appendicitis".

Dr. Leo Kanner, Associate Professor of Psychiatry, Johns Hopkins Medical School, Baltimore, will give to us a practical account of what psychiatry now is prepared to contribute to the practice of medicine, and will stress the practical side and offer concrete demonstration of what the physician in general and special practice can do for his patients even without having had a thorough training in psychiatry.

As one inspects the proposed programme with the somewhat experienced eye of a former chairman, the conclusion is that this year promises to be the best, and the soundness of the practice of appointing a new chairman every third year will be well demonstrated.

H. W. S.

REGISTRATION

84th Annual Meeting Medical Society of Nova Scotia July 7th and 8th, 1937, Pictou Lodge.

H. K. MacDonald, Halifax, N. S.
Dan Murray, Tatamagouche, N. S.
D. F. MacInnis, Shubenacadie, N. S.
A. M. Siddall, Pubnico, N. S.
H. B. Whitman, Westville, N. S.
D. A. McLeod, Sydney, C. B.
W. H. Eagar, Wolfville, N. S.
C. E. A. DeWitt, Wolfville, N. S.
H. W. Schwartz, Halifax, N. S.
P. E. Belliveau, Meteghan, N. S.
C. M. Bethune, Halifax, N. S.
H. G. Grant, Halifax, N. S.
S. W. Williamson, Yarmouth, N. S.
John K. McLeod, Sydney, N. S.
L. M. Morton, Yarmouth, N. S.
John J. Cameron, Antigonish, N. S.
John G. MacDougall, Halifax, N. S.
R. H. Fraser, New Waterford, C. B.
J. Stewart Murray, River John, N. S.
D. J. MacKenzie, Halifax, N. S.
T. R. Johnson, Great Village, N. S.
Norman H. Gosse, Halifax, N. S.
J. R. Corston, Halifax, N. S.
A. L. Murphy, Halifax, N. S.
W. L. Muir, Halifax, N. S.
D. M. Cochrane, River Hebert, N. S.
H. B. Havey, Stewiacke, N. S.
J. C. Morrison, New Waterford, N. S.
J. E. Park, Oxford, N. S.
B. S. Bishop, Kentville, N. S.
L. Favreau, Montreal, P. Q.
J. J. Carroll, Antigonish, N. S.
G. H. Murphy, Halifax, N. S.
H. J. Townsend, Louisburg, N. S.
A. A. Giffin, Bridgetown, N. S.
A. R. Reid, Windsor, N. S.
G. K. Smith, Hantsport, N. S.
A. B. Campbell, Bear River, N. S.
J. S. Robertson, Sydney, N. S.
J. H. L. Simpson, Springhill, N. S.
J. J. MacRitchie, Halifax, N. S.
W. A. MacLeod, Hopewell, N. S.
F. L. Hill, Parrsboro, N. S.
C. L. MacMillan, Baddeck, N. S.
Wm. P. Murphy, Boston, Mass.
Wm. V. Cone, Montreal, P. Q.
G. A. Dunn, Pictou, N. S.
G. Ronald Forbes, Kentville, N. S.
Gerald R. Burns, Halifax, N. S.
J. J. Roy, Sydney, N. S.
F. O'Neil, Sydney, N. S.
G. C. MacDonald, Sydney, N. S.
A. L. Sutherland, Sydney, N. S.
H. V. Kent, Truro, N. S.
G. A. Barss, Rose Bay, N. S.
C. B. Crummey, Trenton, N. S.
Ralph P. Smith, Halifax, N. S.
V. H. T. Parker, Stellarton, N. S.
R. H. Sutherland, Pictou, N. S.
M. R. Young, Pictou, N. S.
D. Drury, Amherst, N. S.
A. E. Mackintosh, Amherst, N. S.
H. B. Atlee, Halifax, N. S.
J. C. Wickwire, Liverpool, N. S.
C. B. Smith, Goldboro, N. S.
A. F. McGregor, New Glasgow, N. S.
D. F. MacLellan, New Glasgow, N. S.
Hugh Ross, New Glasgow, N. S.
A. I. Mader, Halifax, N. S.
Victor Mader, Halifax, N. S.
A. Calder, Glace Bay, N. S.
C. Miller, New Glasgow, N. S.
J. C. Ballem, New Glasgow, N. S.
C. G. Campbell, Pictou, N. S.
J. M. Stewart, Halifax, N. S.
J. J. MacDonald, New Glasgow, N. S.
W. H. Robbins, New Glasgow, N. S.
W. Alan Curry, Halifax, N. S.
S. R. Johnston, Halifax, N. S.
R. M. Benvie, Stellarton, N. S.
E. M. Curtis, Truro, N. S.
Hugh R. Peel, Truro, N. S.
F. J. Granville, Stellarton, N. S.
J. A. Langille, Pugwash, N. S.
R. S. Shlossberg, New Glasgow, N. S.
A. K. Roy, North Sydney, N. S.
C. S. Bezanson, Aylesford, N. S.
J. A. Fraser Young, Scotsburn, N. S.
John Bell, New Glasgow, N. S.
H. D. Chisholm, Springville, N. S.
T. C. Routley, Toronto, Canada.
K. A. MacKenzie, Halifax, N. S.
Frank G. Mack, Halifax, N. S.
Harvey D. Hebb, Halifax, N. S.
C. W. Holland, Halifax, N. S.
G. J. Wherrett, Ottawa, Canada.
T. H. Leggett, Ottawa, Canada.
C. L. Gass, Sackville, N. B.
S. G. MacKenzie, Halifax, N. S.
A. Culton, Wallace, N. S.

Department of the Public Health

PROVINCE OF NOVA SCOTIA

Office—Metropole Building, Hollis Street, Halifax, N. S.

MINISTER OF HEALTH - - - - HON F. R. DAVIS, M.D.,F.A.C.S., Halifax.

Chief Health Officer - - - - - DR. P. S. CAMPBELL, Halifax.
Divisional Medical Health Officer - - DR. J. S. ROBERTSON, Sydney.
Divisional Medical Health Officer - - DR. J. J. MACRITCHIE, Halifax.
Director of Public Health Laboratory - - DR. D. J. MACKENZIE, Halifax.
Pathologist - - - - - - - - - DR. R. P. SMITH, Halifax.
Psychiatrist - - - - - - - - - DR. ELIZA P. BRISON, Halifax.
Superintendent Nursing Service - - - MISS M. E. MACKENZIE, Reg. N., Halifax

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OFFICERS OF THE PROVINCIAL HEALTH OFFICERS' ASSOCIATION

President - - - - - - DR. P. E. BELLIVEAU - - - - - - Meteghan
1st Vice-President - - - DR. H. J. TOWNSEND - - - - - - Louisburg
2nd Vice-President - - - DR. R. A. MACLELLAN - - - - - - Rawdon
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DR. M. G. MCLEOD - - - - - - - - - - - - - - - Whycocomagh
DR. G. V. BURTON - - - - - - - - - - - - - - - Antigonish
DR. C. E. A. DEWITT - - - - - - - - - - - - - - - Wolfville

MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

Hall, E. B., Bridgetown.
Braine, L. B. W., Annapolis Royal.
Kelley, H. E., Middleton (Mcpy. & Town).

ANTIGONISH COUNTY

Cameron, J. J., Antigonish (Mcpy).
MacKinnon, W. F., Antigonish.

CAPE BRETON COUNTY

Densmore, F. T., Dominion.
Fraser, R. H., New Waterford.
Martin, H. J., Sydney Mines.
McNeil, J. R., Glace Bay.
McLeod, J. K., Sydney.
O'Neil, F., Sydney (County), South Side.
Murray, R. L., North Sydney.
Townsend, H. J., Louisburg.
Gouthro, A. C., Little Bras d'Or Bridge, (Co. North Side).

COLCHESTER COUNTY

Eaton, F. F., Truro.
Havey, H. B., Stewiacke.
Johnston, T. R., Great Village (Mcpy.)

CUMBERLAND COUNTY

Bliss, G. C. W., Amherst.
Drury, D., Amherst (Mcpy.)
Gilroy, J. R., Oxford.
Henderson, C. S., Parrsboro.
Cochrane, D. M., River Hebert (Joggins).
Withrow, R. R., Springhill.

DIGBY COUNTY

Belliveau, P. E., Meteghan (Clare Mcpy).
Dickie, W. R., Digby.
Rice, F. E., Sandy Cove (Mcpy).

GUYSBORO COUNTY

Chisholm, A. N., Port Hawkesbury, (M.H.O. for Mulgrave).
Sodero, T. C. C.; Guysboro (Mcpy).
Moore, E. F., Canso.
Monaghan, T. T., Sherbrooke (St. Mary's Mcpy.)

HALIFAX COUNTY

Almon, W. B., Halifax.
Forrest, W. D., Halifax (Mcpy.)
Glenister, E. I., Dartmouth.

HANTS COUNTY

Bissett, E. E., Windsor.
MacLellan, R. A., Rawdon Gold Mines (East Hants Mcpy).
Reid, A. R. Windsor (West Hants Mcpy.)
Shankel, F. R., Windsor, (M.H.O. for Hantsport.)

INVERNESS COUNTY

Lindsay, R. D., Port Hawkesbury.
Boudreau, Gabriel, Port Hood, (Mcpy. and Town).
Proudfoot, J. A., Inverness.

KINGS COUNTY

Bishop, B. S., Kentville.
Bethune, R. O., Berwick (Mcpy.)
de Witt, C. E. A., Wolfville.
Cogswell, L. E., Berwick

LUNENBURG COUNTY

Marcus, S., Bridgewater (Mcpy.)
Rehfuss, W. N., Bridgewater.
Donaldson, G. D., Mahone Bay.
Zinck, R. C., Lunenburg.
Zwicker, D. W. N., Chester (Chester Mcpy).

PICTOU COUNTY

Blackett, A. E., New Glasgow.
Chisholm, H. D., Springville, (Mcpy.)
Whitman, H. D., Westville.
Crummey, C. B., Trenton.
Young, M. R., Pictou.
Benvie, R. M., Stellarton.

QUEENS COUNTY

Ford, T. R., Liverpool (Mcpy.)

RICHMOND COUNTY

Deveau, G. R., Arichat (Mcpy).

SHELBURNE COUNTY

Brown, G. W. Clark's Harbour.
Fuller, L. O., Shelburne, (Town and Mcpy)
Wilson, A. M., Barrington, (Barrington Mcpy.)
Lockwood, T. C., Lockeport.
Churchill, L. P., Shelburne.

VICTORIA COUNTY

MacMillan, C. L., Baddeck (Mcpy.)

YARMOUTH COUNTY

Hawkins, Z., South Ohio (Yarmouth Mcpy).
Morton, L. M., Yarmouth.
Lebbetter, T. A., Yarmouth (M.H.O. for Wedgeport).
LeBlanc, J. E., West Pubnico, (Argyle Mcpy).

Those physicians wishing to make use of the free diagnostic services offered by the Public Health Laboratory, will please address material to Dr. D. J. MacKenzie, Public Health Laboratory, Pathological Institute, Morris Street, Halifax. This free service has reference to the examination of such specimens as will assist in the diagnosis and control of communicable diseases; including Kahn test, Widal test, blood culture, cerebro spinal fluid, gonococci and sputa smears, bacteriological examination of pleural fluid, urine and faeces for tubercle or typhoid, water and milk analysis.

In connection with Cancer Control, tumor tissues are examined free. These should be addressed to Dr. R. P. Smith, Pathological Institute, Morris Street, Halifax.

All orders for Vaccines and sera are to be sent to the Department of the Public Health, Metropole Building, Halifax.

Report on Tissues sectioned and examined at the Provincial Pathological Laboratory from June 1st, to July 1st, 1937.

During the month, 251 tissues were sectioned and examined, which, with 43 tissues from 7 autopsies, makes a total of 294 tissues.

Tumours, simple	23
Tumours, malignant	62
Tumours, suspicious of malignancy	5
Other conditions	161
Tissues from 7 autopsies	43
	—294

Communicable Diseases Reported by the Medical Health Officers for the month of June, 1937.

County	Chickenpox	Diphtheria	Cerebro Spinal Meningitis	Influenza	Measles	Mumps	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	Tbc.-other Forms	V. D. G.	V. D. S.	Whooping Cough	Goitre	Pink Eye	German Measles	TOTAL
Annapolis	2	..	..	..	283	..	..	..	..	..	1	..	1	..	..	..	..	..	287
Antigonish	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Cape Breton	8	..	..	40	..	4	..	..	14	1	..	..	..	..	..	..	..	..	67
Colchester	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	..	..	2
Cumberland	..	..	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Digby	..	..	..	..	35	..	..	..	..	..	..	..	2	..	..	..	..	..	37
Guysboro	3	..	..	..	..	..	..	..	..	..	..	..	2	..	..	..	..	..	5
Halifax City	..	2	..	..	1	6	..	1	24	..	1	..	..	..	1	..	..	..	36
Halifax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Hants	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Inverness	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Kings	..	..	..	8	1	..	..	..	..	..	1	..	3	..	..	..	..	..	13
Lunenburg	..	..	..	..	..	..	..	..	..	..	1	..	..	..	2	..	..	..	3
Pictou	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	..	..	..	4
Queens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Richmond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Shelburne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Yarmouth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
TOTAL	13	2	..	48	321	12	..	1	42	1	4	..	8	..	3	..	..	..	455

Positive cases Tbc. reported by D. M. H. O's. 39.

RETURNS VITAL STATISTICS FOR MAY, 1937.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis	19	17	8	13	8	1
Antigonish	17	9	4	13	8	1
Cape Breton	119	111	66	45	38	4
Colchester	19	32	27	15	16	1
Cumberland	39	44	18	25	13	1
Digby	36	33	10	14	22	1
Guysboro	17	17	3	6	14	3
Halifax	111	115	65	57	45	7
Hants	27	33	19	10	8	1
Inverness	31	33	4	18	12	0
Kings	26	13	13	10	6	1
Lunenburg	29	22	15	19	17	1
Pictou	22	24	17	30	25	1
Queens	15	7	7	4	2	1
Richmond	12	7	1	5	7	1
Shelburne	13	11	6	10	9	1
Victoria	9	10	1	3	1	0
Yarmouth	6	12	10	3	3	0
	567	550	294	300	254	26

OBITUARY

Laurie Longley Harrison, M.D., McGill University, 1904, died at Halifax June 30th. Dr. Harrison was born at Maccan about fifty-seven years ago, and was educated in public schools in that district, later attending Acadia University where he graduated in Arts. After graduation in 1904 Dr. Harrison practised in Pugwash for a year or two and then came to Halifax where he practised until his death.

The death occurred early in June of Miss Annie M. Young, missionary in China, after a short illness of typhus fever. Miss Young was a daughter of the late Mr. and Mrs. George Young of Millsville, Pictou County, and a sister of Dr. M. R. Young of Pictou, and had been a missionary in China for forty years.

Rev. A. D. Morton, D.D., father of Dr. C. S. Morton, died at Halifax on June 15th at the age of ninety-two. Dr. Morton was the oldest graduate of Mount Allison University, and perhaps the last alumnus of the old University of Halifax, now only a memory, and the last of the fathers of Maritime Methodism who did so much towards bringing about the Union now known as the United Church of Canada.

Results of the Annual Golf Tournament of the Medical Society of Nova Scotia at Pictou Lodge, N. S., July 8th, 1937.

First low gross—Dr. L. M. Morton, Yarmouth, Trophy. Electric clock, (The E. B. Shuttleworth Chemical Co., Ltd.)

First low net—Dr. W. L. Muir, Halifax, Birk's Cup and 1 doz. golf balls, (Charles E. Frosst & Co.)

Second low gross—Dr. J. C. Ballem, New Glasgow, Flash light.

Second low net—Dr. J. J. Roy, Sydney, Trophy Shield, (W. M. Clinger) Six golf balls, (Imperial Publishing Co., Ltd.)

Consolation—Dr. W. P. Murphy, Boston, Combination ash tray.

Largest number of putts—Dr. V. H. T. Parker, Stellarton, Thermos bottle.

Largest number of putts on one hole—Mr. W. M. Clinger, Halifax, Wedgewood jug.

Special prize for puts on two holes—Dr. J. J. Roy, Sydney.

Special prize for lowest number of putts on eighteen holes—Dr. L. M. Morton, Yarmouth.

NOTICE

Locums wanted for three months beginning last week in September. Further information may be secured through the office of the Secretary.

Personal Interest Notes

Dr. F. W. Green has disposed of his practice in Glace Bay, and will probably locate in New Glasgow.

Dr. and Mrs. Frank Mack, and two daughters, Margaret and Mary, have returned from a motor trip to Boston and New York and Ottawa, where Dr. Mack attended the meetings of the Canadian Medical Association.

In an address at a meeting of the Registered Nurses Association of Nova Scotia held at Amherst in June, Dr. H. B. Atlee of Halifax spoke on the establishment of a nursing school in Nova Scotia which would possess standards second to none on the North American continent. While Dr. Atlee pointed out that Halifax had been regarded as an ideal site for a post-graduate nursing school, he frankly favoured the necessity of an undergraduate school as an initial step in elevating the standards of nursing education. He pointed out that Halifax possessed medical and educational facilities that would make such a school possible with little inconvenience or difficulty. Declaring that the medical profession insisted upon the premedical student taking two years of art or science as a cultural training he felt that the nursing profession should have the same right. He added that university trained girls should be encouraged to join the nursing ranks.

The marriage took place on Saturday, June 12th, at Halifax of Miss Jean Isobel Morton, only daughter of Dr. and Mrs. A. McD. Morton, and Mr. W. Norman Brittain, son of Mr. and Mrs. James W. Brittain of Saint John. Following a reception at the residence of Dr. and Mrs. Morton, Mr. and Mrs. Brittain left on a trip to the New England States and Central Canadian cities: they will reside in Saint John.

Dr. E. A. Brassett of New Waterford has been appointed assistant superintendent of the Nova Scotia Hospital, Dartmouth.

Dr. V. D. Schaffner of Kentville returned early in June from Saranac Lake, New York, where he attended a meeting of the American Association of Thoracic Surgeons, and of which Society he was elected a member.

We are pleased to learn that Dr. T. W. MacLean of Scotsburn, who is a patient at the Nova Scotia Sanatorium, is improving in health and able to be up every day.

The official opening of the new addition to the Soldiers' Memorial Hospital at Middleton was held on May 27th, at which Dr. L. B. W. Braine of Annapolis was one of the speakers and Mrs. F. S. Messenger and Mrs. J. A. Sponagle presided at the tea table.

Dr. W. E. Murray, Dalhousie 1937, and Mrs. Murray have gone to Truro where Dr. Murray is to be assistant to Dr. W. R. Dunbar.

At the recent meeting of the Canadian Public Health Association held in Ottawa, Hon. F. R. Davis, Minister of Health for Nova Scotia, was named honorary president of the Association, and Dr. P. S. Campbell, Chief Health Officer for Nova Scotia was named president.

The BULLETIN extends congratulations to Dr. K. A. MacKenzie of Halifax who was named president-elect of the Canadian Medical Association for 1938-39 at the annual meeting in Ottawa on June 22nd.

Dr. and Mrs. H. E. Killam of Woodville, Kings County, are on a motor trip to Ottawa, and will return via the Gaspe Peninsula.

Dr. V. O. Mader of Halifax has returned from a trip to Kingston, Ontario, flying from there to Regina to attend a meeting of the Canadian Flying Clubs Association. At this meeting Dr. Mader was re-elected vice-president of the Maritime zone of the Association.

Dr. and Mrs. G. A. McCurdy of Halifax have left for Victoria, B. C., where Dr. McCurdy has been appointed to the staff of the Royal Jubilee Hospital.

Dr. and Mrs. Dan Murray of Tatamagouche have returned from a trip to Ottawa.

Dr. and Mrs. H. V. Kent of Truro have returned from a month's delightful motor trip to Philadelphia, Atlantic City and other American and Canadian cities. While in Atlantic City Dr. Kent attended the annual convention of the American Medical Association.

On June 26th, at New York, the wedding took place very quietly of Miss Aileen Juanita, daughter of Dr. and Mrs. M. A. Macaulay of Halifax, to Mr. Freeman Longley, son of the late A. Smith of Margaretsville, N. S., and Mrs. Smith of Toronto. Mr. and Mrs. Smith are on a trip to England and the Trossachs, later spending some time in Germany and France.

Dr. T. T. Monaghan of Sherbrooke, Dalhousie '33, is taking a year's post-graduate course in England.

Dr. J. C. Webster, Shediac, N. B., has been awarded a medal and special diploma of the Institute Litteraire et Artistique de France in recognition of his work in the production of "Acadia at the end of the seventeenth century", which was published as Monographic Series No. 1 of the New Brunswick Museum. In 1934, Dr. Webster was elected corresponding member of the Institute and given a decoration. In 1930 he was decorated by the French Government and made officer de l'Instruction Publique.

Dr. and Mrs. W. F. MacKinnon of Antigonish have returned from Boston, where Dr. MacKinnon recently underwent an eye operation. The operation was entirely successful and the doctor is improving daily.

TETANUS

Prophylaxis

Modern practice calls for prompt administration of tetanus antitoxin in conjunction with surgical treatment of contused and puncture wounds. Depending on the extent of the injury, either 1500 units or 3000 units (3000 or 6000 international units) of this antitoxin should be given as a prophylactic. The value of this procedure is evidenced by the fact that few of the forty deaths from tetanus recorded in Canada last year resulted from injuries treated in hospitals where the procedure is followed as a matter of routine.

Recent studies have demonstrated the efficacy of tetanus toxoid in active immunization. A series of three doses of this product affords protection against tetanus comparable to the protection against diphtheria which is conferred by administration of diphtheria toxoid. This is of special interest to persons engaged in certain occupations in which the menace of tetanus is relatively great.

Treatment

In treatment of tetanus the usefulness of tetanus antitoxin has been well established. To be properly effective, however, the antitoxin must be administered as promptly as possible and in large quantities. With this in mind the tetanus antitoxin prepared in the Connaught Laboratories is most carefully refined and concentrated for use intramuscularly, intravenously and intraspinally.

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Eight nurses graduated from the General Hospital School of Nursing of Glace Bay at the graduation exercises early in June. Dr. H. L. Scammell of Halifax was the special speaker.

The marriage of Miss Margaret King, R. N., second daughter of Mr. and Mrs. F. A. King, Halifax to Dr. J. Sinclair Robertson, Sydney, Dalhousie '34, son of Mr. and Mrs. A. R. Robertson of New Glasgow, took place very quietly at Halifax on June 5th. Dr. and Mrs. Robertson left immediately after the ceremony on a motor trip to Upper Canadian and the United States cities.

Writing on food and nutrition in the British Medical Journal, E. Cathart professor of physics at the University of Glasgow breaks out in the following bot of rhyme:

"Eat all kind nature doth bestow;
It will amalgamate below.
If the mind says so, it shall be so,
But, if you once begin to doubt,
The gastric juice will find it out."

Children's Memorial Hospital, Montreal

POST GRADUATE COURSE
September 13th, 1937

The Staff of the Children's Memorial Hospital will repeat the Post-Graduate Course in the medical and surgical aspects of the diseases of children, during the week of September 13th, 1937. Last year, many more applications were received for the course than could be accepted. It is anticipated that applications for the course this year will exceed the limited accommodation available. Those desiring to apply for the course are urged to do so without delay. The registration fee is fifteen dollars, including daily luncheons at the hospital for the duration of the course, as well as other entertainment including dinner at the Faculty Club when a prominent speaker will be the guest.

MONDAY—

9.30	Acute anterior poliomyelitis	Dr. H. B. Cushing
10.30	After-treatment of poliomyelitis	Dr. J. G. Shannon
11.30	X-ray demonstration of pulmonary conditions in infancy and childhood	Dr. A. E. Childe
2.00	Acute and chronic otitic conditions common to early childhood	Dr. K. O. Hutchison
3.00	Infant feeding	Dr. A. Goldbloom

TUESDAY—

9.30	Burns	Dr. R. R. Fitzgerald
10.30	Pneumonia in children	Dr. L. M. Lindsay
11.30	Common skin diseases	Dr. J. F. Burgess
2.00	Common types of fractures in childhood	Dr. D. E. Ross
3.00	Non-cardiac manifestations of rheumatic disease	Dr. R. R. Struthers
4.00	Thymus gland in infancy	Dr. G. Ross

WEDNESDAY—

9.30	Rheumatic cardiac disease	Dr. S. J. Usher
10.30	Origin and pathology of masses in the necks of infants and children	Dr. L. J. Rhea
11.30	Urinary infections in childhood	Dr. D. MacKenzie
2.00	Allergy in childhood	Dr. H. L. Bacal
3.00	Childhood tuberculosis	Dr. P. N. MacDermot
4.00	Metabolism department—Nephritis and nephrosis	Dr. A. Ross

THURSDAY—

9.30	Differential diagnosis of vomiting	Dr. A. Goldbloom
10.30	Treatment of congenital deformities	Dr. N. T. Williamson
11.30	Acute and chronic abdominal conditions	Dr. R. R. Fitzgerald
2.00	Eye diseases met with in general practice	Dr. H. S. McKee
3.00	Empyema, lung abscess and bronchiectasis	Dr. D. E. Ross

FRIDAY—

9.30	Acute and chronic osteomyelitis	Dr. R. R. Fitzgerald
10.30	Alimentary toxicosis	Dr. L. M. Lindsay
11.30	Nutritional and deficiency diseases	Dr. H. B. Cushing
2.00	Acute intestinal obstruction	Dr. D. Ross
3.00	Pathology of tuberculosis in children	Dr. F. W. Wiglesworth

SATURDAY—

9.30	Diagnosis and treatment of congenital syphilis	Dr. H. S. Mitchell
10.30	Epilepsy and convulsions	Dr. H. M. Keith
11.30	Discussion and demonstration of anaesthesia in children	Dr. W. Bourne

Dinner at the Faculty Club, Thursday evening, September 16th, 1937. Clinical meeting, Friday evening, September 17th, 1937. Saturday afternoon—golf. Each lecture will last 45 minutes, followed by 15 minutes for discussion. Special demonstrations will be arranged in tonsillectomy, blood transfusions, other intravenous therapy and surgical technique for small groups, if desired.

Varicose Veins

Apparently the incidence of varicose veins is definitely increasing. Whether this is due to changing living conditions, or to definite changes within man's organism, would be difficult to say.

The new injection treatments, which obliterate the involved surface vessels, have been a distinct boon to both patient and physician and are extremely successful in a great majority of cases.

However, in some cases injection may need to be postponed for a time and palliative treatment instituted instead. In other cases, where injections are done, there is a good deal of pain and inflammation at and around the site of the injection. In both instances Antiphlogistine dressings are of great value. Used as hot as can be tolerated, and extending over and well beyond the site of the lesion, the results are frequently immediate and very striking.

Summer Diarrhea in Babies

Casec (calcium caseinate), which is almost wholly a combination of protein and calcium, offers a quickly effective method of treating all types of diarrhea, both in bottle-fed and breast-fed infants. For the former, the carbohydrate is temporarily omitted from the 24-hour formula and replaced with 8 level tablespoonfuls of Casec. Within a day or two the diarrhea will usually be arrested, and carbohydrate in the form of Dextri-Maltose may safely be added to the formula and the Casec gradually eliminated. Three to six teaspoonfuls of a thin paste of Casec and water, given before each nursing, is well indicated for loose stools in breast-fed babies. Please send for samples to Mead Johnson & Company, Evansville, Indiana.

LOCUM WANTED

The Secretary has had an inquiry for a locum for a period of two weeks, beginning September 10th. Further information may be had on request.

DIARRHEA

"the commonest ailment of infants in the summer months"

(HOLT AND McINTOSH: HOLT'S DISEASES OF INFANCY AND CHILDHOOD, 1933)

One of the outstanding features of DEXTRI-MALTOSE is that it is almost unanimously preferred as the carbohydrate in the management of infantile diarrhea.