When the Doctor is Sick

T. W. MacLean, M.D.

THE doctor is a tiller of the soil. His fields are the human body and mind. The soil he tills is the tissues, and organs of that body. The crops he tries to grow are immunity, resistance to disease, and healing power. If the crops fail, his patients wither and die. He tries to keep the soil clean and rich, so his plants will flourish and be strong enough to repel every disease and pest. Sometimes he has to use sprays and germ killers.

The doctor should be a patient. He should know how it feels to be ill and suffering. He should be able to feel the anxiety of those in trouble. And he should be able to realize the blessed relief that can often be brought by a capable helper.

I would like to give that farmer a good idea now and then if I could, for we all wish to give the sufferer relief. Perhaps I might add an idea or a thought if I tell something of my own story, for I have been having a long adventure with serious illness. For the last twenty months I have been in bed, in The Nova Scotia Sanatorium, most of that time. Both lungs were involved, almost completely. There was a large cavity in each and there were several serious complications including tuberculous laryngitis, adhesive pleuritis, purulent pleural fluid and others.

My case was far advanced and apparently hopeless; but our doctors and nurses have managed to build up my resistance so well that all the complications have been overcome, the cavities are healed and the disease has receded to a small area in each lung. I feel quite well and strong now, and am hoping to round off the last corners and accomplish a fairly complete cure. Most of that was accomplished without benefit of surgery, except that I had a partial pneumothorax on one side for some months. An adhesive pleuritis robbed me of that; so, tomorrow, Dr. Schaffner is going to do a "phrenic" for me.

First you ask: How did I, a doctor, allow the disease to become so far advanced before recognizing it? That too is a long story beginning in the wet, the mud, the cold, the crowding and unsanitary conditions incidental to service as a private in the war. There, every winter, we all coughed from fall until spring. That left some residual infection in the tubes. During the first years I was on the alert, expecting tuberculosis and had several complete investigations. The findings were all negative so my apprehensions were lulled.

During the winter 1935-36 my colds were worse. One night, while having a race with the stork, my car got stuck in a snow-bank, and I was working strenuously to get away, and coughing my head off all the time. Then I noticed the sputum appearing rather blood stained on the snow. That, "gave me seriously to think"; but I was busy, and it was hard to get away in the busy winter season. That had happened before and X-rays had all been negative —and so I reassured myself and let the thing slip. One day early in the winter Dr. MacRitchie was conducting a diagnostic clinic in my office, and as we

waited between calls, I started to take off my own shirt, and say: "I have a cough myself, so you might as well run over my chest while we are waiting". Then another patient came in and interrupted us. Being busy for the rest of the afternoon, the idea went out of my mind—and such a trivial incident as the arrival of that patient may change the whole course of one's lifetime. Five months of strenuous winter activity went past before I had another examination. Then my chance was gone for my trouble was far advanced.

These details may seem unimportant but they are worth pondering, for they are typical of the mental attitude and experience of many patients.

I often thought during the latter part of that winter, "If I felt tired and draggy I would think I had tb." But I never felt so lively and frisky in my life. These last days before the diagnosis was made I was actually effervescing with energy, dancing around on my toes as I did my work, and enjoying every minute of the day more than I ever did in my life. That is a point worth noting—one may be stimulated rather than depressed by the toxins of tuberculosis. That last afternoon before the report of the sputum test came from the laboratory I worked off some of that surplus energy by helping a neighbour plow. He was trying to plow with a fiery "standard bred" and could not manage both horse and plow, so I handled the plow.

When the mail brought the envelope containing the report of my sputum test I held it a while unopened looking at it and thinking, "Well, if this is positive, if it is tuberculosis, it will be far advanced and hopeless. This may be my death sentence." Then I opened it and it said "Positive for tubercle bacilli." My wife and the children were sitting there just after supper and I wanted to keep the news from them, but she asked for the report, and reluctantly, I gave it to her. Under the circumstances it seemed that there was nothing in the world for me to do but work along while I could; pay off as many of my debts as possible, and then go out in harness. Of course she would not hear of that and soon convinced me to take off my clothes and go to bed. You have no idea how the future looks from that position, when you have a wife and three small children, and are expecting to welcome another any day; when there is very little laid up to provide for them, and there are debts to be considered as well. There was only one comforting thought—a considerable bulk of insurance which might become available—and I hoped it would be soon.

In spite of everything, rest was gracious during the succeeding days. With rest the euphoria and restlessness passed off, and the soft mattress felt good. It seemed that if the old frame could only sink deeper into it, and press harder against it, that rest would be more complete.

In a few days I felt able for one more duty—to go to the city, have a complete investigation, and find out just where I stood. The report from that examination was not so hopeless—"a definite lesion in the right apex, with a cavity; the other lung being clear except for a suspicious area near the hilus".

Sanatorium treatment and compression of the lung were recommended.

That was very desirable but hard to manage under the circumstances; so, temporiarly, I substituted bed rest at home. To make sure there would be no increase of trouble in the meantime, I made that rest very complete. For about two weeks that seemed fine; but then everything went wrong. I could not sleep nor even rest; the sight of food or the thought of mealtime was repulsive; many pills and enemata gave little result except increased misery. I felt completely wretched.

One morning after my bath the room was chilly and I neglected calling for an extra blanket. In a few hours I felt very tired, tired and chilly. That afternoon I shook and shivered all afternoon in spite of many blankets and hot water bottles—and there was an agonizing pain all over my "good" lung.

That was later proved to be a pneumonic spread involving almost the whole lung. Now what was the cause of that spread? Quite true! I had been losing ground gradually but this was a disastrous loss. In my own mind there is no doubt at all that the sudden change from intense activity to complete rest was too drastic. Take an athlete off training suddenly; put any active man at complete rest for a like period, and everything will go wrong. He will feel miserable. Try it yourself some day. Even though a man has active tuberculosis, he should not suddenly change from great activity to complete rest. The change should be made gradually. Many authorities will disagree with that statement; but these are my own ideas I am expressing here—and it cost me one good lung to find that out.

The chilling was a minor exciting cause. Trifles like slight chilling or a few goose pimples are nothing to a patient in good condition. But when he is just barely holding his disease in balance, a mere trifle may tip the scale and precipitate disaster.

And here is an interruption!

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One day later:—Just as I finished that last paragraph the orderly came to wheel me to the O. R. for my little operation; so right here would be a good place to tell a few things about it that might be of interest.

The pre-operative medication pleased me very much. I had phenobarbital grs. 1½ h.s., repeated in the morning; then codeine grs. 1, an hour before operation. That gave the most peaceful feeling—apprehensions all stilled; and floating on beds of ease; a trivial matter like an operation being of small importance;—and that is a good state of mind in which to approach the O. R. Sensations were numbed too, for I was trying myself as I waited. I could scarcely pinch myself hard enough to hurt. With local anaesthesia the knife still gives a gritting unpleasant sensation, but here it felt as if someone were stroking the skin with something very soft and caressing. The nerve was readily exposed, and the sharp dart of pain in the tip of the shoulder when the nerve was pinched was not too distressing. Then Dr. Schaffner said, "Sorry, but I'll have to hurt you now. Your neck is so deep that I'll have to elevate the nerve before I can inject it." So he picked it up with Allis forceps. That was truly a devitalizing pain. It gave a feeling of despair, and "I can't stand this" sort of feeling. It only lasted half a minute or less though and the relief was compensatingly grateful. That put an edge on the little adventure.

I intended to go right along writing as soon as I would get back from the O. R.—just to show the boys, you know! But when the novocaine lost its effect my neck felt seriously wounded and I was glad to lay the writing aside. It's better to-day but I still belong to the stiff necked generation.

Schaffner cuts the nerve, then sutures it. He thinks that gives better results than crushing, for a temporary interruption. One thing more: skin clips are not nearly as comfortable as sutures.

Now to pick up again the thread of our interrupted thoughts:—Arriving at the Sanatorium, August, 1936, I was quite prepared for bad news. This

was my report: "Both lungs involved almost completely, from apex to base; a large moderately thick walled cavity in right apex, and suspicions of several small ones; one large thin-walled cavity in the left lung."

That made it final! I had always admired the man who could walk up and meet his death sentence without a quiver and had hoped I could do the same when my turn would come. Things look different though when one is weak and ill. It was hard enough to control the emotions; and there was not much sleep that night.

During the next three months the trouble seemed to be marching on to its culmination; with attacks of fever, pleurisy and pain to mark its progress. But every week there was a little gain in weight. The Fall was wet and gloomy, the days grey and cold; and it was hard to keep my thoughts from being like them. The termination of life is not a thing one should dread; but oh! Life had been sweet, every minute of it; and it had been getting better every year! In the long sleepless nights there were serious reflections about dollars and cents, and sore anxiety as to how the loved ones would be cared for.

In November the diagnosis of tuberculous laryngitis was definitely confirmed.

In December I was expecting my next progress report, and one gloomy Sunday morning the superintendent came in with my chart under his arm. I was hoping he would not go all over the hopeless details again; that seemed so unnecessary. Instead, he stood there for a few moments looking at me in a strange quizzical sort of way, then said, "Do you know, doctor, you have a nice improvement in that right lung? That interlobar pleurisy has done good work, walling the trouble off in the upper lobe. The lower lobes are clear. The left is stationary."

From that day to this each report has shown good improvement. One year from date of admission all cavities were closed. For eight months I stayed on whispering treatment faithfully, then the larynx was normal, and now my voice is as good as it ever was. In February, 1937, the pneumothorax was increased to 60% collapse which was maintained until August or September. But there had always been pain from strain on adhesions, and in September an adhesive pleuritis made its appearance. One night the pain and shortness of breath were almost unbearable. During the night they both almost disappeared, and the fluoroscope showed a change of outline, and collapse increased to 75% or more. The adhesion had broken.

That gave the future a cheerful outlook. But soon manometer readings showed positive pressure in the pleural cavity, and the smallest amount of air added would send the pressure away up; so pneumothorax had to be discontinued—a disappointment. Fluid gathered, and soon it was purulent. Then one wondered if tuberculous empyema would be the next thing—and that is a lingering death, taking years and years to wear the victim out, without even the hope that a fatal haemorrhage may some day come along and graciously end the process. However, in a few weeks the fluid was clear again, and soon it had dried up altogether.

There are so many things to write about that this little article wants to grow into a whole book, so I must prune carefully, or my sermon will be too long. And incidentally—it has been quite painful having Nova Scotia doctors preaching long dry sermons at one another in the last issues of our magazine. Do they not know that the cobbler should stick to his—ah—stethoscope?

But we must hurry along! Tuberculosis involving the whole of both lungs, with a large cavity in each, tuberculous laryngitis, adhesive pleuritis and purulent pleural fluid—a picture like that gives only one prognosis. Now why am I recovering?

Pneumothorax and collapse therapy? Helpful, but the pneumothorax was only partial, and temporary—ten to twelve months; and the worse cavity healed without any artificial aid, even when that lung was doing all the work.

There is no doubt that the main factor in resistance and healing is something inherent in the patient, something that he gets from his parents and ancestors. In that regard this seems illuminating; I have never heard of any of my own ancestors, or either side, having this disease. So there certainly was good inborn resistance.

There are many other factors to be considered such as:

Fresh Air—This certainly played an important part. Fresh, clean, stimulating air is a great tonic, and has many other virtues. But, I spent more hours actually in the open air as a country doctor than I do here at the sanatorium. The windows are closed part of each day here, and I was outside most of the time formerly.

Diet—We were well fed at home, but there are some differences. Here there are two little jugs of cream on our trays at each meal. The fat soluble and other protective substances contained may play quite a part—who knows? We drink six glasses of milk a day and that needs no comment—except to say that latterly I have had to curtail the milk on account of excess weight. Vegetables and fruit—we are well supplied with them. Carrots are the vegetable richest in protective substances; and Miss Brown, our dietitian, has a good knack of working them in, in interesting ways. We get little sweets. We take no medicine, so whatever builds us up must be in what we eat. The cure is closely associated with the kitchen and the dining-table or tray. We have a saying here that the way to get well is to "clean out your trough every time, then roll over and grunt and sleep." It is hard for tuberculosis to make headway against a good stomach and a good appetite. We are only beginning to understand the mysteries of diet.

Smoking—I make many statements in this article that are not definitely backed up by scientific proof and data. They are merely my own convictions, but I present them boldly. I was an enthusiastic smoker—smoked for twenty-three years, enjoyed it, and was continually looking forward to the next smoke. But every time I inhaled smoke it irritated, and actually hurt. I feel confident that if I had not abused my bronchial tubes and alveolar tissue by dragging smoke back and forth through them a thousand times a day, I would not have had either bronchitis or tuberculosis. I stopped smoking twenty-one months ago. The struggle was not nearly as heroic as I expected, but the craving has lasted long. I could devour a smoke right now! I feel confident that if I had continued inhaling smoke, I would not have made such good progress toward recovery —cough, that awful cough! I think I would have been dead!

There is one iniquity common to those who give up smoking: they make nuisances of themselves by attempting to proselytize all other smokers, exhorting them all to give it up. I hope I avoid that, but if you have time here is one other little yarn.

My grandfather Robert and his brother Lauchie lived on adjoining farms. One day Lauchie came in and announced in a sanctomonious way, "Well,

Robert, meself and me son Luther quit the pipe and all other bad habits." —Two days later Robert was sitting in the kitchen after dinner enjoying himself among clouds of smoke. Then he saw Lauchie hastening across the field with a festinating gait, his head yearning forward. He burst into the kitchen and grabbed the pipe out of Robert's mouth saying, "Aw, jist *two draws*, Robert!"

Exertion—We patients are especially cautioned about such things as stretching and reaching. The expression heard most frequently is, "Look out, you'll strain your tissues!" Functional stretching and compression of the lung by yawning, singing, loud talking, straining at stool, sneezing and coughing are especially contraindicated. The cough of tuberculosis is peculiar and different from that of an ordinary cold. If the disease is not too acute the cough can be controlled and restrained. Few coughs a day are needed, for the sputum (in non-active cases) is thin and slippery. It can easily make its way up to the throat by ciliary action or in some way, and is readily "hawked" out. At our Christmas dinner there were about two hundred of us in the dining hall, for more than two hours, and not one cough was heard all evening. The explosion of a cough or sneeze is seriously abusive to an inflamed lung.

There are many things we have to give up and I found it harder to stop laughing than almost any other. The lung is usually adherent at the apex; it is inflamed and friable, so when the diaphragm jiggs up and down in laughing, it is stretched and contracted unmercifully. When you're on silent treatment, and strictly forbidden to laugh, then every silly little thing is liable to set the giggling apparatus off; as this did mine: one day during silent rest hours, everything was very quiet on the porch. Then Captain———sneezed, "a choo!" then much louder "a chooo!" then, with a fearful roar, "a chohoooo!" then in a subdued whisper "Jumpin' J....!" There was nothing very funny about it perhaps, but it must have wrecked several months repair work for me; and every time I thought of it since the diaphragm began its spasmodic jerking.

Surgery—Collapse therapy and surgery are very popular here, among both patients and staff. The results are excellent in many cases, but, of course, even surgery is helpless where natural resistance is defective.

Early Diagnosis—Early tuberculosis cannot be diagnosed with the stethoscope. This fact should be emphasized and reiterated. Many a good life has been lost because that is not appreciated by all doctors. In this institution there are many illustrations, many tragic illustrations—people who have gone to their doctor and had a chest examination; nothing being found, they were reassured; and their cases were far advanced before their suspicions again awakened. It would almost seem that there are more people here who have had that experience than the reverse. My own particular friend and porch mate was examined by three doctors, who told him he had no tuberculosis. On visiting the fourth he had his mind made up to insist on an X-ray; and he thought: "If that says there is nothing wrong I must be going foolish." But the fourth made the diagnosis. He had bilateral disease and a moderate sized cavity.

Such things do not increase the prestige of our profession.

In the early stages, the most skilled listener cannot hear the rales and other sounds, for they are not there. When they can be heard easily the disease is already rather advanced. Also, a careful analysis of the case history is more valuable in yielding clues than a chest examination, in early cases.

But the eye of the X-ray is almost all seeing in this regard. It is uncanny how accurately it can detect tuberculosis in the early stages.

Gains in Weight—We patients weigh ourselves every Friday morning; and those added pounds and half pounds represent our wealth. We treasure them as a miser does his gold, for we think they represent progress. But some poor souls step off the scales each week with a stricken and disappointed look. They are steadily losing and recognize its significance. A protective blanket of fat over a tuberculous body is no bad thing; and one cannot help speculating about fat soluble vitamins and other protective substances being stored there in reserve. My own share of this wealth is an added forty pounds or more, and those who knew me previously might scarcely recognize me now as a stocky looking person of 175 lbs.

Colds—Tuberculosis and colds are an evil pair which hunt together. The cold prepares the way. It breaks down resistance, and tubercle gets a foothold. It is difficult indeed to distinguish between a series of colds and the onset of the major illness. Then during treatment or convalescence, colds and exacerbations, or recurrences, also mask one another. Of this more later.

Rest—Inherent ability to combat and repulse the bacillus is the greatest factor in the fight, but rest still comes next in importance. In my own case fresh air, good food, etc. may be almost disregarded, for they were not greatly different before and after illness set in. I was a slave to colds for years. Now I have not had one cold for a year and a half. Colds are uncommon among us patients, except occasionally among those who are not thriving; and then it is difficult to distinguish them from exacerbations. Last winter during an influenza epidemic many of the nurses and staff were ill, but the disease could make poor headway among the patients. We were all exposed. Few but the weak contracted the illness. Is the riddle of the common cold largely one of fatigue? Why is it that a man can go down almost to the brink; and with little change, save rest, build up strength and hope again? Are the toxins of fatigue actual substances which feed, fertilize and stimulate the tubercle bacillus, and other evil things? These are questions which exercise the mind while lying here.

Given an active brain, a cheerful outlook and hope of recovery, resting for months in the clean fresh air can be wondrous pleasant. The most remarkable feature is the speed with which the time dances away. Even in the sleepless nights the church clock down town beats a merry tune. The person who says your friends will soon leave when trouble comes is a liar and a fool. It is worth enduring a long, serious and crippling illness to experience the loveliness that the loyalty of true friends can bring. To a man who is ill, and worn by anxiety for his loved ones, the company of a good friend is a gladsome thing.

Tuberculous Empyemata

V. D. SCHAFFNER

Surgeon to the Nova Scotia Sanatorium.

During the past ten years or so, a great deal has been written about tuberculous empyema, and it is not proposed in this paper, to set forth any really new ideas concerning it. Until recently however, and especially in this province, the subject has been of particular interest only to those most directly in care of the tuberculous sick and to surgeons doing thoracic work. With the increasing number of "pneumo stations" over the province, and with them the increasing number of physicians carrying on therapeutic pneumothorax, the problem is becoming more generalized and so demands and deserves a little more careful thought on the part of all of us.

Concerning the pathogenesis of pure tuberculous empyema, a great deal has been stated and a great deal denied. Much theory and much fact exist, but the question can still be put down as not definitely solved. However, it is a well known fact that empyema usually occurs as a complication of therapeutic pneumothorax, oleothorax or spontaneous pneumothorax. All those connected with the care of the tuberculous sick know well that ordinary effusions, or so-called wet pleurisies, seldom become purulent. Of greater importance to us to-day are those coming on after induced pneumothorax. According to a recent article of Coryllos, quoting Weisman, about 84% of all pneumothoraces are complicated either mildly or severely by serous effusions. In the same article, he states that about 18% of those become purulent and develop into empyemata. That means, according to those figures, that 15.12% of all induced pneumothoraces will be complicated by purulent exudates. Our own percentages at the Nova Scotia Sanatorium have not been worked out, but this is to be undertaken at a later date. It is the feeling that they will follow closely the figures given above. These figures cause one to stop and think. Pneumothorax cannot be called a minor procedure for the most part devoid of danger. It can only be advised by a trained man and with a degree of caution. As will be pointed out later, it is the opinion of the writer that the probability of empyema can be predicted in certain cases and in these perhaps certain steps can be taken to prevent its formation.

How do purulent tuberculous effusions develop? The probability is that they occur from the breaking down of foci on the surface of the lung, forming a pulmonary-pleura fistula, either large or small. This superficial caseation discharges infected material into the pleura cavity, where it incubates and grows, later forming purulent exudate. With the persistance of the fistula, there is constant re-infection, and with larger fistulae, the very great danger of secondary infection. Coryllos, through gas analysis of the pleural air in tuberculous empyemata, in a rather large series of cases, has come to the conclusion that all empyemata of this type are dependent upon the formation of fistulae. The presence of fistulae can be demonstrated by his method (when they cannot by our ordinary methods) such as by the in-

jection of various dyes and aromatic oils into the pleural space and watching for their appearance in the sputum.

If such is the origin of empyema, it follows that it will occur only in those cases with superficial or sub-pleural disease, and therefore should be found most frequently in cases of pneumothorax complicated by adhesions. It should be found relatively infrequently in those pneumos in which the lung is completely freed by the injection of air. In discussing this matter recently with Dr. Beckwith, he felt such to be the conditions present in the cases developing empyemata at the Sanatorium during the past several years. Adhesions are indicative of sub-pleural disease. Without it they would not be present. The cases we have so far operated upon have all had adhesions. At the moment of writing we have 18 cases, most of which are purely tuberculous, but a few are mixed. These were recently reviewed for operation and most of them will be operated upon during the next few weeks. All of these were adhesion cases and a number had had previous thoracoscopic examinations in which future development of empyema was predicted.

The prediction of empyema by means of thoracoscopic examination brings up an interesting point. During the past year and a half or more it has been the practise of the writer to make a note on the operative sheet in all cases where it was suspected that empyema might develop, and it has been rather surprising how often these predictions have developed into fact. These examnations were done during the course of the operation of internal pneumolysis or attempts at such. One might argue that the operation of cutting the adhesions was the cause of the empyema, but this is not sustained in that empyemata followed in cases which were inoperable for various reasons, where nothing was done beyond the examination. The reason for predicting empyemata was largely based on the presence of large or even small tubercles which appeared to be undergoing caseation just under the visceral pleura and particularly at the lung attachment of adhesions. Here, of course, they are always most numerous.

To digress slightly, but still of importance to the subject, one can ask the question, when should the operation of internal pneumolysis be done? The weight of opinion to-day is that it is not necessary to cut adhesions, provided they do not interfere with satisfactory collapse and control of the lung disease, that is, in cases that have closed cavity or controlled diseased areas with a negative sputum.

The writer feels that it is quite probable that in many cases, adhesions should be cut even if good collapse is obtained. Adhesions create a point of tension, especially with coughing or any sudden movement of the lung, and it is quite possible that diseased areas at their base may be opened by a sudden, or even steady, strain. Certainly it seems that they are a potential danger if a positive pressure exists in the chest. Whether or not this thought is correct remains to be seen. We are now cutting quite a number of adhesions that fall into this class.

The appearance of the visceral pleura and surface of the lung brings up another point on further procedure. Should there be present superficial disease, which appears to be of a dangerous type as far as the development of empyema is concerned, would it not be wiser to re-expand the lung and substitute a phrenic resection or a thoracoplasty, depending upon the extent and nature of the lung disease? This is a question that we cannot answer with any degree of assurance at the present time, but we hope that future experience will help

to clear it up. So far as the writer is aware, this particular phase of the problem has not been studied or reported.

Tuberculous empyemata have been divided into various classes by different writers. Some are simple, others are more complicated. Archibald's or Coryllos' classifications are as simple as any, and doubtlessly just as useful. Archibald's type (I) are those in which the fluid is thin, but turbid, and contains tubercle bacilli. His type (II) are those in which the fluid is definitely purulent and thicker, containing only tubercle bacilli. His third type includes the mixed-infective empyemata. He makes no distinctions as to underlying pulmonary disease. Coryllos also divides empyemata into three groups, but in these groups stresses the importance of underlying lung disease. He divides them as follows: (1) Empyema with negative sputum (2) empyema with positive sputum and (3) mixed infective empyema. These classifications have a very definite and important bearing on treatment, as will later be pointed out.

In a paper of this scope, it is not necessary to discuss the symptoms, signs and pathology of the disease as it is usually readily discovered during the course of pneumothorax treatment. No delay should be made in the use of diagnostic aspiration, and the quick and efficient instigation of proper treatment. Unfortunately, the thoracic surgeon usually sees these cases in more advanced stages, when the handling of the case is more difficult and the final result more doubtful. The treatment, naturally, is divided, as is the treatment of most diseases, into the two great groups, namely, medical and surgical. What can be said for medical treatment, that is, ordinary rest cure, aspiration, air replacement and washing with various solutions—antiseptic and otherwise? Again quoting from Coryllos' article, the mortality of pure tuberculous empyema with negative sputum is around 10% with approximately 70% cure. With empyema and positive sputum, the mortality figure is 40%, and for the mixed infective type is more than 80%. On the other hand, taking the groups as a whole, when treated surgically, the mortality falls to 25 to 30%, while the cures increase to 70% to 80%. It at once becomes apparent that it is essentially a surgical disease.

The point of when a case is to be treated by aspirations and washings, with or without air replacement, or when is it to be treated surgically, may be discussed a little further. From the point of view of treatment, the writer likes to divide these cases into five classes. The first is the acute case coming on suddenly during the course of pneumothorax treatment. The patient probably has had a serous effusion, but has been relatively free of symptoms. Suddenly he develops fever and general symptoms, and the fluid is found to have become purulent. This probably is occasioned by the formation of pulmonary fistula of relatively large size, due to the breaking down of subpleural disease. The patient becomes rapidly sick. He certainly is in poor shape for operation, and doubtlessly has lost a degree of his immunity. In this case it is believed that aspirations and irrigations should be done, for a short time at least, in order to reduce the activity and toxicity, and also to see just which way "the cat is going to jump". It should not be persisted in for too long a time, for fear of added mixed infection from the open fistula, with a still poorer operative risk and a more complicated operative problem. Only by constantly watching such a case with careful study from all angles, is it possible to say just when a thoracoplasty should be substituted. Just a word might be said regarding the type of fluid used in irrigating. If empyemata are largely dependent upon pulmonary fistulae for their formation, why

use a proteolytic fluid such as Dakin's and others, which might and probably do, dissolve away protective fibrin plugs from these fistulae? Probably as good and as safe a fluid as any is ordinary saline.

The second class or group is that in which the fluid is rather thin but definitely turbid and contains tubercle bacilli (Archibald's Type I); the empyema cavity is relatively small; the sputum is negative, and there is doubtful need of further compression. In these cases one is justified in following a course of aspirations and washings and attempting to re-expand the lung. The empyema cavity is thus obliterated by bringing the lung out to the chest wall instead of, as in thoracoplasty, carrying the chest wall into the lung. As far as the empyema is concerned, the result is the same—the lung will stick and the cavity will be obliterated. If deemed necessary to keep the lung collapsed a little longer, a phrenic resection may be added. If in these cases, after two or three months of such treatment, it is found that the pus is becoming somewhat thicker or the lung is not re-expanding with satisfaction, a thoracoplasty should be substituted without further delay. The results of operation in these cases are excellent and one can count on an extremely high percentage of cures with a very minimum of operative mortality.

The third group of cases are those in which the pus is still thin (the same as the above group, Archibald's Type I) but where there is need of continued pulmonary collapse. Here it is not safe on account of pulmonary disease to attempt re-expansion. Serial films show the disease to be too extensive to be controlled in the time of the existing pneumothorax. A cavity may have recently been, or may still be, present. A positive or negative sputum has a decided bearing on the handling of these cases, but it seems to the writer, a not all important one. The recent or present condition of the lung is just as important as the presence or absence of bacilli in the sputum. In this group one is again justified in an attempt to control the empyema by irrigations and aspirations, provided it is considered that the lung disease can be brought under control by continued pneumothorax (and doubtlessly such will be thought, or the pneumothorax would not have been started). If this latter point is in doubt, a thoracoplasty should be substituted at once. If not, one will be gratified by a relatively large percentage of successes by conservative treatment. Again one is not justified in carrying on this treatment too long. If the pus becomes thicker or fails to clear up after a few months delay, valuable time is wasted. The results of thoracoplasty in these cases are again extremely satisfactory, depending, of course, somewhat on the underlying lung condition.

In the fourth group, that of thick pus (Archibald II) with or without need for further pulmonary compression, there is little need for argument. The figures speak for themselves. It is true that some will clear up under conservative treatment, but the danger of secondary infection and failure with loss of valuable time is so great that it is, in most cases, not justified. The results of thoracoplasty are still so gratifying that there is little excuse for not applying it early.

The last or fifth group (Archibald III) is the bug bear. This group includes the mixed-infective empyemata and no matter how treated, it carries a high mortality. The pity is that so many progress to this stage when adequate surgical treatment might have been applied earlier in their career. The most of them are either desperately sick or decidedly unstable. Each and every one presents its own individual surgical problem, and no generalized statements

can be made regarding treatment. Even in these cases, the writer prefers to do ordinary thoracoplasty if the patient is not too sick or toxic to allow it. This is accompanied and followed by aspirations and washing of the pleural space. The doing of ordinary thoracoplasty, however, is too often complicated or prevented by numerous infected sinuses along old needle tracts. In certain cases an attempt may be made to partially control the secondary infection by irrigations, previous to operation. This is only possible where large pulmonary-pleural fistulae are not present. If the secondary organism is streptococcus, sulphanilanide may be of value. The writer has had no cases of pure streptococcul secondary infection and can make no statement as to its value.

Unfortunately, one is forced far too frequently to use open drainage to control the ravages of the secondary infection. This decidedly complicates the future operative procedure, as it is usually necessary to follow it by a Schede operation, that is, the removal of the whole chest wall, except skin and muscle, over the empyema cavity. After the ribs and parietal pleura are removed from over the cavity, the musculo-cutaneous flap is allowed to fall back on the lung and left to heal to it. The operation, of course, is done in stages. It is a severe operation, done on very sick patients, and it is not surprising that it carries a high mortality.

At the Nova Scotia Sanatorium our series of empyema cases operated upon is still relatively small, but we have done and are still doing quite a number. These have included all the various types mentioned above. The operative results have been extremely satisfactory. A more detailed study is to be undertaken and will be reported in the future. This will be done with the active co-operation of Dr. Miller, the Medical Superintendent, and his staff, who are all keenly interested in the subject, and in the clarifying of some of the details.

A Visit to London and Copenhagen Hospitals

L. R. MORSE, M.D., Lawrencetown, N. S.

DURING the present summer the writer visited London and Copenhagen hospitals, and it has been suggested that some account of the trip might have items of interest to the readers of the BULLETIN, especially those who have in mind overseas post-graduate work.

London is the greatest city in the world and thus has an abundant supply of clinical material, either for the student working for his medical degree, or the post-graduate going up for his fellowship in medicine or surgery or for the practitioner who, like the writer, is "brushing up" generally.

Many hospitals provide facilities for the study and treatment of the sick of London's millions. If one's imagination could comprehend the population of Canada with all her medical institutions segregated within the borders of one city, it would only partially visualize London and her hospitals. The number of persons in London is only part of the picture—for that number includes people of every race and clime. The five hundred ships a day, that sail the Thames, come and go among the Maritime cities in the world, and on those ships are passengers and crew, who harbour strange and unusual diseases.

The cosmopolitanism of London is one of its chief attractions to the medical student. You will find everything and everyone in London. All other cities of the world are dwarfed by her wealth of opportunities and the splendid facilities which have been developed for the prevention and cure of diseases.

Many of the London hospitals have associated medical schools, e.g. Guy's, St. Bartholomew, Charing Cross, Middlesex, St. Thomas, etc. Some, if not all, of these have been open continuously for several hundred years. When one glances over a list of the medical institutions of London he is reminded that here is the very centre and heart of British Medicine and the names of the men associated with them have become household words wherever English speaking medicine is practised throughout the world.

Anyone familiar with British medicine will remember that during the last century, Lister spent ten years at King's College Hospital establishing antiseptic surgery in opposition to the prejudices of London's surgeons. Astley Cooper, Richard Bright, Graves, Addison and John Hunter are selected for mention, as being of the front rank of the older generation of British practitioners. In modern times, Victor Horsley and Gowers, at Queens Square Hospital, laid the foundation of neurological surgery—Patrick Manson accomplished great advances in tropical diseases and there have been many others.

To-day, Lockhart-Mummery, at St. Marks in proctology, Thompson Walker at St. Peters in urology, Bonney and Berkely in gynaecology, Miles in surgery of the abdomen for cancer, Sir Thomas Lewis, at the Heart Hospital,

and many others are building the imposing structure of British medicine, whose foundations have been so well and truly laid by former generations.

The following is a partial list of the general and special hospitals of London, which the writer has visited at various times:

General	Special
Guy's.	Chelsea Hospital for Women (Gyn.).
St. Thomas.	St. Peter's for Stone—Urology.
St. Bartholomew's.	St. Mark's—diseases of rectum.
King's College.	Cancer Hospital.
Middlesex.	Brompton Chest Hospital.
Charing Cross.	National Hospital—diseases of the heart.
London.	St. John's—Skin.
University.	Blackfriars—Skin.
Northern.	Tropical diseases.
St. George's.	Neurology—Queen's Square.
Westminster.	St. Ormonde Street—Children.
	Moorfields—Eye.

and also the College of Surgeons, with its large and complete pathological and anatomical laboratory, including the John Hunter's collection. This is an incomplete list for many other hospitals are engaged in caring for the sick of London besides many nursing homes where private and well-to-do patients are taken.

All British hospitals are supported by voluntary subscriptions and are open to all patients, attendance free—as a consequence, they are suffering for lack of funds in these days and must soon have support. Government aid for London hospitals is the probable solution for this pressing need.

The study and methods of treatment of "all the ills that flesh is heir to" as carried on in the hospitals are made available to post-graduate medical or surgical students by the organization, known as the "Fellowship of Medicine", Wimpole Street and by the British post-graduate school, both of which are excellent.

The Fellowship of Medicine, at present, is perhaps better for the practitioner, who is not intending to make a long stay in London. It is well organized and the courses are well attended. The practitioner may take "all day" or "afternoon" courses, on any subject. The "all day" courses, as in gynaecology, urology, proctology, etc., cover two weeks.

Tea and lunch are served free at the hospital at 11 a.m. and 4 p.m. Fees for the courses are from three to five guineas each.

Week-end courses are also arranged for local or visiting medical men who are too busy to leave their practices during the week. They come to London, to take short courses of lectures on Saturday and Sunday.

The longest courses, apparently, are for applicants for the F.R.C.P. and the F.R.C.S., primary and final examinations. These are arranged for eight weeks and cover the subjects on which applicants are examined for those degrees. Fees for the Fellowship examinations are £21 for primary examinations and £14/15 for the finals. The following will give the reader an idea of the great variety of subjects that have been arranged for the accommodation of everyone. There are many other courses in all the specialties.

POST-GRADUATE COURSE IN PROCTOLOGY

TO BE GIVEN AT

ST. MARK'S HOSPITAL FOR DISEASES OF THE RECTUM, CITY ROAD, E.C.1

(City S.L. Rly. to "Angel", No. 5 Tram from King's Cross or 'Buses 30, 67, 73 to the "Angel", Islington.)

JULY 5th TO JULY 10th, 1937.

Monday, July 5...	10.00 a.m.	Mr. L. E. C. Norbury. Ward visit.
	11.30 a.m.	Dr. C. E. Dukes. Museum Demonstration on Pathology of Cancer of the Rectum.
	2.00 p.m.	Mr. J. P. Lockhart Mummery. Operations.
	4.30 p.m.	Dr. Norman Henderson. Lecture: "Modern Advances in the X-ray Examination of the Large Intestine."
Tuesday, July 6...	9 30 a.m.	Mr. E. T. C. Milligan. Operations.
	11.30 a.m.	Mr. E. T. C. Milligan. Lecture: "Procto-colitis."
	2.00 p.m.	Mr. L. E. C. Norbury. Operations and Lecture: "Colostomy."
	5.00 p.m.	Mr. C. Naunton Morgan. Out-patient Demonstration.
Wednesday, July 7	10.00 a.m.	Mr. W. B. Gabriel. Ward visit.
	11.30 a.m.	Dr. C. E. Dukes. Museum Demonstration on Pathology of Intestinal Diseases.
	5.00 p.m.	Mr O. V. Lloyd-Davies. Out-patient Demonstration.
Thursday, July 8..	10.30 a.m.	Mr. J. P. Lockhart Mummery. Lecture: "Diverticuliti."
	12.00 noon	Dr. J. Browning Alexander. Lecture: "Acute Abdominal Pain."
	2.00 p.m.	Mr. W. B. Gabriel. Operations.
	5.00 p.m.	Mr. E. T. C. Milligan. Out-patient Demonstration.
Friday, July 9....	10.00 a.m.	Dr. J. K. Hasler. Lecture: "Anaesthesia in Rectal Surgery."
	11.00 a.m.	Mr. W. B. Gabriel. Lecture: "Anal Fissure."
	2.00 p.m.	Mr. C. Naunton Morgan. Operations followed by Lecture: "Fistula."
	5.00 p.m.	Mr. C. Naunton Morgan. Out-patient Demonstration.
Saturday, July 10.	10.00 a.m.	Mr. O. V. Lloyd-Davies. Operations followed by Lecture: "Post-operative Treatment."
	1.30 p.m.	Mr. O. V. Lloyd-Davies. Out-patient Demonstration.

Tea will be provided on Operating days.

The Fee for the Course is 3 guineas, and the names of those wishing to attend should be sent, with the fee, **IN ADVANCE**, to the Secretary of the Fellowship, at No. 1, Wimpole Street, W.1.

This Course is open only to Members and Associates of the Fellowship of Medicine. Annual Membership Subscription £1 1. 0.

WEEK-END COURSE IN MEDICINE AND SURGERY

AT MILLER GENERAL HOSPITAL, GREENWICH ROAD, S.E. 10

(New Cross Station, thence 10 mins. walk. Bus 53 or 153 past Hospital, alight Greenwich Road.)

SATURDAY, JULY 10th AND SUNDAY, JULY 11th, 1937.

Saturday, 10th July.	
9.30 a.m. to 10.30 a.m.	Mr. John Sandrey. "Stone in the Kidney."
10.45 a.m. to 11.45 a.m.	Dr. Harold Pritchard. "Meningitis and Meningismus."
12.00 noon to 1.00 p.m.	Mr. Myles L. Formby. "Treatment of Nasal Polypi."
	Interval for Lunch.
2.15 p.m. to 3.15 p.m.	Dr. William Smith. "Blood Diseases from a Laboratory point of view."
3.30 p.m. to 4.30 p.m.	Mr. G. G. Exner. "Minor and Major Modern Oral Surgery."
	Tea.
Sunday, 11th July.	
9.45 a.m. to 10.45 a.m.	Dr. H. V. Morlock. "Some points in the Diagnosis and Treatment of Chest Conditions."
11.00 a.m. to 12.00 noon	Mr. T. Meyrick Thomas. "Selected Surgical Cases."
12.15 p.m. to 1.15 p.m.	Dr. J. R. Wylie. "Carcinoma of the Stomach."
	Interval for Lunch.
2.30 p.m. to 3.30 p.m.	Mr. Edwin A. Lindsay. "Acquired Deformities."
3.45 p.m. to 4.45 p.m.	Dr. H. L. Marriott. "Dehydration: its importance in General Practice."
	Tea.

The Fee for the Course is £1 11s. 6d., and the names of those wishing to attend should be sent to the Secretary, Fellowship of Medicine, 1, Wimpole Street, W.1.

Open only to Members and Associates of the Fellowship of Medicine: Annual Membership Subscription £1 1s.

It is an advantage for a single medical man to arrange a meeting with: Commander P. Crofton, London House, 4 Caroline Place, Guilford Street, London, W.C.1. This is a medical centre for medical men while studying in London. Board can be obtained for £2.5s. per week, with comfortable quarters. Information and advice about courses can be obtained here. It is also a centre for information about positions as locum tenens and internships for younger men. In conversation with an Australian, he said that he had kept up his classes and paid all expenses by taking locum tenens and intern positions, for two years, so that he expected to go up for his F.R.C.S. finals this fall.

It is interesting to note the variety and types of students attending these courses. In a gynaecology class at the Chelsea Hospital for Women, the writer found it was limited to twelve. Half of the number were women, two from India, two from Burma, one from Malay, one from Scotland. The men were, one from South Africa, one from Australia, one from London, one from Canada, one from Lancashire and two from India. All were very agreeable and friendly and very industrious in taking notes. Canadians and Americans were not so frequently met. It is said that they prefer Vienna, where the post-graduate work is highly organized and many opportunities may be had for practical work in general surgery, gynaecology, urology, etc. The large majority of the class were preparing for degree examinations—especially a new degree, F.C.O.G., Fellow of College of Obstetrics and Gynaecology. We received excellent reviews of each subject as the whole ground was covered and opportunity offered to see operations applying to each day's lectures.

The newly established Post-Graduate School is favourably spoken of by medical men in attendance. They say that every one of the staff is anxious to help the student and the courses are good. However, the number of patients available as cases is not large, although increasing rapidly. At this school, which is better for the man who is making a long stay, are facilities for any period from one week to three months. George Gray Turner in surgery, and Victor Bonney in gynaecology, are well known teachers in this school. Clinical assistantships are available where the student gets fine opportunities for practical work. Candidates are attached to a member of the staff and are responsible for the performance of their duties to that member. They may be required to undertake any special work which is considered desirable.

Before our stay in London we had the opportunity of visiting two large Danish Hospitals. Unfortunately we had only four days in Copenhagen, but were able to see the Finsen Institute and a large one thousand bed hospital. The Finsen Institute is celebrated all over the world as the home of Finsen's work on treatment of lupus and other skin conditions by ultra violet rays. One is able to get around Danish hospitals in spite of language handicaps, for the Danes nearly all have, as they call it, high school English, so that while there is some hesitancy for the right word, I was able to get a good understanding of everything. This hospital was erected in 1896 and is where Finsen developed the Finsen light. A large clinic is carried on here, a whole battery of the Finsen lights being seen. Finsen's room was shown, in which were displayed his Nobel Prize award together with many honorary degrees received from foreign countries. A very complete modern X-ray department has been added for the treatment of cancer. There is a large surgical wing for treat-

ment of cancer. Finsen Institute is now largely a centre in Denmark to which cancer cases are sent for diagnosis and treatment.

The Bispebjere is a thousand bed hospital, beautifully situated amidst lovely gardens. It is divided into four units of two hundred and fifty beds each. We visited the surgical wing which is under the direction of Drs. Abramson and Gregorson. No difficulty was found in making our way about and an interesting morning was spent watching the work done in the two finely equipped operating rooms. The operators were skillful and everything was efficiently carried on by the nursing staff. I noticed that on making the primary incision for a hysterectomy, an adherent coil of small intestine was cut, but quickly closed and further procedures of the operation carried on secundum artem.

They told me that Evipal was used a good deal for long operations, by injecting into vein additional amount of drug, as required. It was considered safer for weak and aged patients. Ninety percent of prostates were treated by transurethral resection with excellent results. Dr. Abramson said he had practically done away with the suprapubic and perineal operation. This was opposed to the London practice at St. Peters, where no other procedure is carried on for prostatectomy except the suprapubic operation.

We came away with the impression that Copenhagen has high class hospitals, with excellent staffs.

During our stay in Berlin we were too busy sight-seeing to visit hospitals. The glories of Potsdam and the many other places of interest were very distracting and our four day stay here was soon over. But Germany has much to offer the post-graduate. The Canadian Medical Journal of June, 1937, has an announcement of post-graduate instruction, which seems very attractive. Lectures in English can be arranged for, at ten marks per hour. Opportunities for introduction into German families can be arranged, so that the German language can be acquired. There is a sixty percent reduction on railway and steamer fares in Germany. Diplomas are awarded for three months (or over) study. Living can be obtained for 200 marks, ($50.00) per month. The above are among the important inducements held out to the English speaking medical man who is seeking post-graduate work in Germany.

Apart from the interesting experience of an overseas holiday, the medical post-graduate will benefit by a trip to any British or continental hospital—the amount of good will depend on time and energy expended.

The young graduate who is looking for an F.R.C.P. or F.R.C.S. will have a busy stay in London. It will take two years to obtain the degree but is something worth while. Those who have no time for a degree can obtain a clinical assistantship in all the specialties which will give further competence.

Anyone visiting American and Canadian hospitals is impressed w th the fact that the practice of medicine and surgery is carried on on this side of the Atlantic in an excellent manner. The methods and practice are much the same as overseas. It is a question in some minds as to whether the centre of gravity of the medical world has not shifted westward to this continent. Post-graduate study as carried out in New York is expensive. Probably London is cheaper and better arranged for all classes of practitioners. However, stimulation and mental refreshment to the medical man can be obtained in many ways without going so far afield. For instance, I heard no better lectures and clinics than we have at the Refresher Course at our own doorstep.

Who Should Make Examination of the Eyes?

J. A. M. HEMMEON, M.D., Wolfville, N. S.

MY question is directed to those members of our profession who have to decide where they shall send their patients to have an examination of the eyes. Too often when an examining physician decides that his patient's troubles are due to, or aggravated by, an error of refraction the patient is told to, "Go to have your eyes examined."

This is interpreted by the patient to mean that he should go wherever his inclination may direct him, either to an optometrist who may also be the local jeweller, an optician, or it may be to an oculist, if one is available.

The family physician may think that because he does not refer many patients for an eye examination, it is not very important where his patients may go. But the patients will notice and will tell their friends that they were not referred to an oculist, but were allowed to go to anyone who would "examine their eyes", and so by inference the family doctor is quoted as having no preference in this matter.

But if we reflect a little we will see the responsibility of the physician. In these days, with many optometrists and opticians using the prefix "doctor" and getting away with it, it is increasingly difficult for the public to decide what difference there is between an optometrist and optician and an oculist or ophthalmogist.

In the United States many oculists are adopting the words "eye physician" to describe their special qualifications. A questionaire sent out by the Guild of Prescription Opticians of America has disclosed the fact that eighty per cent of their clients did not know any difference between an optometrist, an optician and an oculist. This led to the suggestion that oculists use the designation "eye physician". It is true that not all oculists are good refractionists, and it is true that some optometrists are good refractionists. But an examination of the eye, even when the patient's symptoms point to an error of refraction, is not merely an estimate of the refractive ability of the eyes. If it were, then the family doctor might be justified in sending his patients to an optometrist, if he were known to be a good refractionist. Realizing that a patient who complains of poor vision may be suffering from some pathological condition of the eye and that defective vision may be but a forerunner or accompaniment, of disease in some other organ or part of the body, the optomatrists themselves have made a gesture of protection to the patient which the doctor who says "go and have your eyes examined" might well consider. They have written into the laws governing the practise of optometry a clause requiring their licensees to have a knowledge of ophthalmoscopy. In a recent publication of an American optical company an advertisement of an ophthalmoscope, which was intended to reach the optometrists, contained the following: "Examining boards everywhere insist that an applicant for license should have knowledge of ophthalmoscopy. . . unfortunate-

ly not all provinces require actual possession and use of an ophthalmoscope in all eye examinations, an inconsistency which time and enlightened legislation may correct." This is amusing, of course, and one can look forward to enlightened legislation requiring every licensed physician to carry and to use a stethoscope. But it is also enlightening and it should be a warning. If, presently, Mr. Patient can go to his friend, an optometrist, and have an electric ophthalmoscope flashed in his eyes, and also get a refraction, he may well feel reassured when told that all he needs is a pair of glasses. This advertisement is headed "A Moral Obligation" and to quote further from it: "Anyone trained in ophthalmoscopy can readily recognize such afflictions as keratitis, iritis, cataract, optic atrophy, optic neuritis, chroiditis, hemorragic retinitis, diabetic retinitis, syphilitic retinitis, detatched retina, glaucoma and many others." We may hardly agree with all of this, but it should be a warning of worse things that may come. It is a reasonable thing for the optical company to try to enlarge the sales of its instruments. It is not reasonable to compel the optometrist to make an ophthalmoscopic examination and it should be our duty so to warn the public. Here the issue should be squarely before the medical profession. Too often the patient, through the indifference of, or unknown to, his physician, goes to the optometrist for relief under the impression that he will save money. And too often he is given glasses which are not needed or that carry lenses of inferior quality of glass. Some opticians' stores are full of very cheap and very inferior lenses which are disfigured by striae, bullae, blebs, incorrect centration, irregular and incorrect axes. These lenses can be sold very cheaply and are "dear at any price", for it is impossible to get comfortable vision through any of them. In any case, where there is a question of the ability of the patient to pay the usual fees, the referring physician should always be able to make an arrangement with the oculist that will be satisfactory to the patient.

As a result of the war waged by optometrists and opticians on the use of cycloplegics before refraction and the resultant fear of their use by the public, many physicians are requesting that their patients have their eyes examined "without drops". Some oculists are doing refraction without the use of cycloplegics out of deference to this feeling. This is unfortunate and deplorable. It should not be necessary to repeat and to emphasize that children's eyes cannot be properly examined and refracted without the use of a cycloplegic. And that the majority of young adults need at least some suppression of their accommodation before refraction, and that many patients not in this age class need some relaxation of accommodation for proper examination. Few, if any, examiners can do a complete ophthalmoscopy without first using a mydriatic in the patient's eyes.

The "Moral Obligation" of the advertisement should become the further moral obligation of us as physicians, that we should discourage the use of the ophthalmoscope in the hands of any, and of all, except those who have been trained to recognize conditions of the eye revealed by this instrument, and confirmed by medical authority, as indicating disease.

The Kidney; A Review of Anatomy and Methods of Investigation

I. R. SUTHERLAND, M.D., Annapolis Royal, N. S.

THIS paper is not really the diagnosis and treatment of kidney conditions but will take in the surgical anatomy and physiology of the kidneys, the tests used in determining their functional power and the technique used.

The kidneys lie obliquely on the posterior wall of the abdomen. The upper end of each being 2.5 cm., the hilum 3.5 cm. and the lower pole 4 cm. from the mid line. The anterior surface has an antero-external aspect.

The upper border of the kidney corresponds to the middle of the 11th. dorsal vertebra, and the lower border, to the lower border of the transverse process of the 3rd. lumbar vertebra—5 cm. above the iliac crest. The left kidney reaches to the upper border of the same process. The hilum of the kidney corresponds to the 2nd. lumbar vertebra.

The upper $\frac{2}{3}$ of the kidney lies under cover of the 11th. and 12th. ribs. Rarely the 12th. rib is absent, or it is short and only comes into relation with a small portion of the kidney, or it may be long and project beyond it.

At the level of the lower end of the kidney the ureter starts to expand into a trumpet extremity, which passes the hilum and enters the sinus of the kidney. This is the renal pelvis. At its junction with the ureter a narrow part is frequently seen.

As it passes upwards the pelvis usually separates into two primary divisions—a small upper and a larger lower branch. Each of these separate into three or more subdivisions called the calyces, (the average number is 9). The calyces receive the apices of the pyramids of the kidney on which open the large collecting tubes. The calyces are arranged in an anterior and a posterior series. Modifications of the primary division are not uncommon producing a compound branching pelvis or a dichotomous pelvis.

The average capacity of the renal pelvis is 15 cc. Distension with 10 cc. or less in the living subject usually gives rise to pain.

The renal pedicle consists of the renal artery and vein, the lymphatic vessels, the nerves, ureter, and a varying amount of fat.

Of surgical importance is the aberrant renal artery found in 20% of cases. This may arise from the trunk of the renal artery, the aorta, or one of the parietal arteries such as the inferior phrenic. The vessel may pass into the kidney at the hilum or may enter the surface of the kidney at either the upper or lower pole on either the anterior or posterior surface. Such a vessel is more frequent on the left side and above the normal renal artery. An abnormal renal artery may pass either in front or behind the ureter. Of importance is the fact that when the kidneys are abnormal in shape or position, an abnormal blood supply is common. Irregularities in the veins are also common. The surgical importance of these abnormalities lies in the fact that in nephrectomy an abnormal vessel may escape ligature and cause serious haemorrhage, and also that nephrosis may result from pressure of the vessel on the ureter.

The kidney performs two most important functions. It eliminates waste products such as urea and uric acid and it adjusts with the greatest precision the clinical composition of the plasma. It also probably controls the volume of the blood plasma. In pathological conditions of the kidney these two functions are interfered with. The amount of interference is determined by the various tests of kidney function.

For the sake of convenience these tests may be grouped as follows:—

1. The relation between fluid intake and output.
2. The time taken for the elimination by the kidneys of certain dyes.
3. The estimation of the blood urea.
4. The urea concentration test.
5. The urea clearance test.

No one of these tests is sufficient to supply the information needed. The safe plan is to carry out two or three and correlate the results—but one must always take into consideration the information obtained from the clinical examination of the patient. What is really required in a test of renal function is a test of renal reserve, that is, a means of assessing the capacity of the kidney to rise to an emergency. The urea concentration test should never be done without previously having determined the urea content of the blood, since what otherwise might be regarded as a good reading may actually be associated with a high blood urea. The chief advantages of this test are its simplicity and the fact that the power of the kidney to excrete urea is a better index of its efficiency than its power to excrete artificial products such as the dyes.

No test of renal function can be considered accurate or complete unless it takes into consideration all the factors which exert an influence upon that function. The level of blood urea and the urea concentration test are limited as guides. Both of these tests take into consideration one factor only. The urea clearance test, which is the latest used, is based on three factors. First, the level of urea in the blood, second, the amount of urea in the urine, and third, the rate of excretion of urine by the kidneys. Although still imperfect this test is more delicate and gives one more information regarding the efficiency of the kidney than any other test. The blood urea clearance may be described as the number of cubic centimeters of blood which would be cleared of urea per minute by the kidney if that organ were completely to remove the urea from the blood. This test will indicate impairment of renal function before urea, uric acid or creatinin is increased in the blood. It gives most valuable information in cases where blood urea and urea concentration tests indicate normality, yet disease of the kidney is suspected.

Next in order of investigating a urological case is the procedure of cystoscopy. Using aseptic precautions the cystoscope is passed per urethra into the bladder and any urine is collected and examined for pus, blood, casts, etc. The bladder is then filled with sterile water and examined visually, noting the trigone, interureteric bar, and ureteral orifices. The bladder mucosa is then examined for any inflammatory condition, new growth, etc. Calculus is also sought.

The ureters are then catheterized using a no. 4 or 5 catheter of radiographic type. The urine is collected from each kidney into sterile test tubes for bacteriologic examination. The next step in the procedure is the carrying out of the dye test already mentioned. For this we use indigo carmine, 10 c.c. of which is injected into the median basilic vein. The time between

the injection and the appearance of the dye through the catheters is noted. This test is of most value where it is desired to contrast the action of one kidney with the other, or in cases of urgent surgery, such as a ruptured kidney, when before removing one kidney, it is necessary to make a rough and ready estimation of the efficiency of the other. If the dye does not appear within 15 mins. following its injection, it is practically certain that the kidneys are deficient.

A double exposed film is then taken to determine whether there is a stone in the ureter or not.

Eight c.c. of 15% skiodan is then injected through the catheters, which are then withdrawn a few inches and 2 c.c. more injected, provided the patient does not complain of pain in the kidney areas. Films are then made. These films show whether or not one has evidence of kidney distortion, such as kink in the ureter, nephrosis, etc.

Though not altogether satisfactory in the larger percentage of cases, but very helpful in others, we now have in addition to the retrograde pyelography, the intravenous use of dye to give the X-ray picture of the urinary tract. *Diodrast* is one of the dyes used.

As yet this method is far inferior to the retrograde one. Not only is it less reliable but does not furnish details needed.

Ureteral catheterization is very helpful sometimes during abdominal operations such as hysterectomy, where large myomas or adhesions are present. The catheters in the ureters define their course and damage to them is at a minimum. Methylene blue by mouth is also of value in these cases. The ureters if injured, eject the dye into the operative field and the surgeon can repair the damage done.

There are cases where the patient complains of symptoms not referable to the urinary tract but taken as abdominal in origin. How many cases of stone in the right ureter have been operated on for appendicitis? How many abdomens have been opened when the cause of the trouble is a pyelitis? There is also the case of a dropped right kidney being diagnosed as a malignant growth in the hepatic flexure of the colon; then also the case of a sarcomatous growth in the splenic flexure being operated on for pyonephrosis. Cystoscopy would reveal the true nature and the patient would benefit by it.

Cystoscopy is dreaded by the patient as a rule and a large percentage of practitioners do not advise their patients having it done. The present day technique and agents used, do not as a rule give much discomfort. It is common for a patient to walk to the hospital, have a complete cystoscopic examination and then walk home.

This paper as you have noticed does not take any one urologic condition under consideration. We have tried to generalize on the different tests and methods used to-day to effect a diagnosis.

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NO editorial in sight and the BULLETIN going to press. What is to be done about it! In desperation one's colleagues were appealed to individually and collectively, but they all began with one accord to make excuses. The section of the province responsible for this column in this issue has failed to play its part. The local editors are responsible for editing, but feel that they are in no way under obligation to continually prepare material for this column. That is your task, or perhaps to express it better, the opportunity to give your views on matters of common interest to the whole profession in this province.

The suggestion was recently made that the physicians of this province be asked to send to the BULLETIN anecdotes, personal experiences of an interesting and unusual character, clever sayings and shrewd comments that they may have heard as they have gone about the country-side. If such true stories have a medical flavour so much the better. Possibly some of our friends in other walks of life may be gifted story tellers, if so, you could exercise your most persuasive powers to get them to dictate some of their best material. There must be literally hundreds of entertaining and amusing items of one kind and another, as varied in type and character as our people in origin.

Sometimes my good humour becomes frayed. I have just opened this week's B. M. J. and out tumbles half a dozen leaves called a supplement, a much better name would be a nuisance. This week I had the librarian look up a reference only to find it had been published in a wretched supplement. This particular one has been lost, so there we are, high, dry and blasphemous. Had the article been part and parcel of the Journal and bound accordingly, my adrenals might not have suffered nor my nervous system become exhausted. We feel sure the editors of that great Journal would change their policy without a moment's delay once they realized the devastating effect of their present practice on the bodies, minds and spirits of their readers. Probably they do not believe in hell any longer, and consequently have no qualms of conscience about being their brother's keeper.

We do not, however, have to go to the other side of the ocean to find fault. I have a case report before me, and there is hardly a sentence that contains a verb, if it is possible to speak of such a combination of words as a sentence, and the anatomical references are sloppy and slovenly in the extreme. The material itself is excellent, and a few hours spent with the text-book, anatomy and grammar would have resulted in a much more pleasing report.

The March issue of a magazine with a continent wide distribution contains an article on the Roentgen-ray as a therapeutic agent. The publishers give their readers to understand that they assume no responsibility, but only present it for its "human interest value" whatever that may be. We have already asked Dr. Johnston to prepare a paper that may be a guide to the practitioners in this province as no doubt this article will be read widely, and old fogies like ourselves will be looked upon as being ultra, ultra conservative, if not almost prehistoric in our attitude to the marvels and miracles now being wrought in the greatest city of the New World. This terrific agent is as powerful for evil as for good and articles such as we refer to will leave behind a trail of suffering unless we who will be first consulted, or should be first consulted, are equipped with sufficient knowledge to stand between our patients and disaster.

H. W. S.

CASE REPORTS

Appendicitis in Pregnancy

Acute appendicitis is a not infrequent and a supremely important complication of pregnancy, and if only the diagnosis can be established within 48 hours from the onset appendectomy can be undertaken safely. If the intra-abdominal manipulations can be reduced to a minimum the pregnancy is not necessarily interfered with. Abortion occurs in about 20% when operation has to be undertaken during the first 3 months of pregnancy (Maingot). After the third month the liability to abort becomes increasingly less.

The chief difficulty in dealing with appendicitis complicated by pregnancy is to establish the diagnosis. I herewith submit one case report which I consider interesting because of the desperate condition of the patient, the hyperpyrexia, the fact that she aborted and the long convalescence, due to the slow healing wound.

Mrs. G. P. Aet. 17 yrs.

Admitted to hospital, April 3, 1936 at 11.30 p.m. with these complaints. Pain in right lower quadrant, nausea and vomiting and soreness in side.

Obstetrical History—First pregnancy and five months pregnant.

Present Illness—On morning of April 3rd. she was seized with abdominal cramps and nausea and vomiting. Her cramps were not especially severe, but she was when examined definitely tender over right lower quadrant. Vaginal examination revealed definite tenderness high up in right fornix. Urinalysis was negative for glucose, albumen, acetone and deposits. A laparotomy was imperative and at 1.30 a.m. she was admitted to operating room and a McBurney incision was made. The uterus had the appendix pushed well over and some difficulty was encountered finding the appendix which when seen was gangrenous and ruptured. It was removed and stump inverted in usual manner and abdomen closed with drains to Pouch of Douglas and right kidney pouch and abdomen closed. She left the table in fair condition.

The following day she started to vomit and pulse rate went to 140, with T. 104 and R. 32 and copious drainage from the incision, abdomen was distended and Rhefus tube inserted and stomach lavaged with 2 qts Sod. Bicarb. Solution. Intravenous Saline, 600 cc was given twice daily and Coramine given as a heart stimulant. Stomach lavage was instituted q. 4.h. and 20 cc of thick green mucous was aspirated each time. Three days after admittance her rectal temperature went to 106 deg. and on the following day at 12 noon it reached 108.2 degrees. This latter temperature was produced because one hour previously she had been given an intravenous saline and had severe chill at that time. At 4 p.m. rectal temperature was 106.2 and at 8 p.m. it was 101. From then on her condition was very precarious for a few days when she gradually started to pick up and I felt that she might get well and not abort. Of this I was fearful lest she die of peritonitis. She was fed through the Rhefus tube until April 10th when this was removed. She was kept as much as possible on right side to encourage drainage. Drains were removed on April 15th. On April 28th. labor pains began and she was delivered of a living premature

female child which succumbed 24 hrs later. Nothing happened following delivery other than a 10 minute chill, 1¼ hrs. following. The incision stayed wide open and discharged for a long period and she was given insulin 5m.t.i.d. ½hr a.c. to help heal the incision. She was discharged on June 3rd, 2 months following admission although incision was not entirely healed.

I have seen this patient several times since she returned home. Wound gradually healed and today she is enjoying the best of health.

G. K. SMITH,
Hantsport, N. S.

A Case of Protracted Haematogenous Tuberculosis

G. L., male, age 20, was admitted to the Nova Scotia Sanatorium on November 16, 1936.

His mother died of pulmonary tuberculosis and his sister was curing at home.

He last felt perfectly well in February 1936 when he developed a cold and pain in the chest. In April he again had chest pains. He was x-rayed and bed rest advised. He entered the local hospital on June 9th. complaining of a cough and pleurisy. He remained there for eight weeks during which time a pint of fluid was removed from the left chest.

He then returned home until the middle of September when he began to vomit and run a high fever. Again he was hospitalized and a pint of fluid removed from the right side of his chest. Two days later another pint was removed.

When admitted to the Sanatorium in November, his strength and appetite were good but he had lost ten pounds in weight during the past year. He noticed slight hoarseness of the voice in the mornings. There was no cough but he raised about two drams of mucoid sputum daily. No history of haemoptysis.

General physical examination was within normal limits. There were no palpable glands.

Chest examination was indicative of a small pleural effusion at the right base but was otherwise negative.

X-ray examination of the chest was as follows:

Right: Definite clouding over entire lung field most marked from the fourth rib to base. We note the curve of Damoiseau present, indicative of a moderate effusion at the base.

Left: No parenchymatous pathological change is noted. There is definite thickening of the basal pleura with definite restriction of the diaphragm. Pericardio-diaphragmatic adhesions are noted. Heart shows slight displacement to this side.

Temperature 98.8 ; Pulse 100-120; Respirations 20.

Urinanalysis was normal.

Sputum negative for tubercle bacilli.

Hb. 83%; R.B.C. 3,890,000; .B.C. 7,000; Polys. 57%; Eosinos. 4%; Lymphos. 29%; Lymphoblasts 2%; Monocytes 8%.

Sedimentation rate was one hour and ten minutes.

The patient continued to be afebrile and the pleural fluid gradually absorbed until February 16th, 1937 when the inside of his upper lip began to

swell and became quite painful. Continuous heat was applied and the lip began to discharge from its inner aspect a thin watery fluid which became definitely purulent. This gradually improved and cleared completely in about a month.

On February 23rd. he began to complain of a sore throat. The tonsils were greatly enlarged and inflamed and the pharynx injected. By March 1st. there was marked glandular involvement on both sides of the neck.

On March 20th. 4cc. of pus were aspirated from a swollen gland over the left sternomastoid muscle. On March 25th, another 4 to 5 cc. were aspirated. On April 6th., 19 cc. of pus were aspirated from a large gland at the angle of the right jaw and 4 cc. removed from the previously mentioned gland. It was not possible to demonstrate the presence of tubercle in the pus.

On April 13th. a tonsillectomy was performed under local anaesthesia in an endeavour to remove a focus of infection. Post-operative recovery was uneventful and the throat improved.

On April 24th, there appeared a swelling on the dorsum of the left foot. This was very painful, tender, fluctuated and became about the size of a pullett's egg. Aspiration yield 10 cc. of sanguinous pus, negative for tubercle bacilli.

On May 6th., a glandular swelling on the left side of the neck ruptured through the skin with the escape of considerable pus. Two days later the swelling on the foot ruptured with the discharge of sanguinous pus.

About this time, a swelling similar to that on the foot appeared on the lateral aspect of the upper third of the right forearm.

X-ray of the foot did not show any gross pathological bone change. There was no evidence of pathological change in the elbow joint.

X-ray of the chest on June 1st. was as follows:

Right: The previously noted pleuritic changes are less marked. There is very little if any fluid left. There may possibly be a slight scattered parenchymal lesion, but it is impossible to say definitely due to the pleural clouding.

Left: Slight obliteration of the costo-phrenic sinus. The lung field is free from pathological change.

By July 5th. his temperature had reached normal, pulse was 74 to 90 and the respirations 20. He was gradually allowed full bathroom privileges. Dressings were no longer required to the neck but there was still considerable discharge from the foot.

On July 11th. he complained of general malaise and his temperature rose to 99.6°. Three days later he was nauseated and vomited at 10 a.m. By 10.30 a.m. he was unconscious and the temperature rose to 101° and the pulse to 132. From then until his death on July 25th, he vomited everything taken by mouth. There were numerous convulsions.

Spinal puncture on July 20th. revealed a pressure of 250 mm. of water. The laboratory picture was quite typical of a tuberculous meningitis.

This case would seem to suggest the presence of an active tuberculous lesion somewhere in the body from which there were repeated periodic discharges of tubercle bacilli into the blood stream, first affecting the pleura of the right lung, then that of the left followed by involvement of the cervical glands, subcutaneous tissues of the foot, the arm and finally the meninges. It is also probable that the lip affection was tuberculous. All this occurred over a period of thirteen months.

J. E. HILTZ.

A Case of Dual Cervical and Mediastinal Adenopathy.

C. L. female, age 49, married, was admitted to the Nova Scotia Sanatorium for investigation on August 27, 1936.

The presenting symptoms were, loss of weight, strength and appetite, shortness of breath and fever.

The family history was non contributory except that her husband was receiving treatment for pulmonary tuberculosis at the time of her admission.

The personal history indicated whooping cough, measles and tonsillitis as a child. There had been an attack of "rheumatism" involving the knees in 1932. She had never been robust but had always enjoyed fair health.

In January 1936, the patient first began to notice shortness of breath upon exertion. She also developed pain across the back below the shoulder blades and in the left shoulder region. This became more marked until July 1936 at which time she noticed increasing tiredness. In spite of bed rest she did not improve for some time. However, she partially recovered her strength until her admission in August when her only symptom was shortness of breath on exertion. A week previously her family physician found she was running an evening fever of 100.4 to 101 . There had been 25 pounds weight loss during the previous five months. Appetite good. No hoarseness of the voice. There was an occasional unproductive cough. No history of night sweats, pleurisy nor haemoptysis. Menses had been absent for five months, probably due to the menopause.

Physical examination revealed the mucous membranes pale; skin and conjuncticae had a definite icteric tinge. There were three small hard nodules in the right supra-clavicular triangle. These were discrete and not attached to the skin but were fixed to the deeper structures. There were no other palpable superficial glands. The breasts were normal. Nose, throat and laryngeal examination were within normal limits. Abdominal examination revealed a very marked aortic pulsation but no other abnormal finding was noted.

Physical examination of the lungs showed broncho vesicular breathing over the left apex with a few moderately coarse rales at the left base which cleared on coughing.

Cardiac examination showed the apex beat to be in the 6th interspace just outside the midclavicular line. The right border was 2½ inches to the right of the mid sternal line. There was a loud blowing murmur extending through both systole and diastole, best heard in the aortic area but extending down the left border of sternum to the mitral area. There was reduplication of the second sound at the base of the heart as though the aortic and pulmonary valves did not close at the same time. Blood pressure was 146/96 being very slightly higher in the left than in the right arm. The cardiac diagnosis was "Organic heart disease causing right ventricular preponderance. Possibly some obstruction and in the region of the pulmonary vessels."

X-ray examination of the chest showed—

Right: Exaggeration of lung markings. Daiphragm normal. Right margin of heart well over into the right lung field and the mediastinum appears widened. The right lateral aspect of the mediastinum is fairly clear cut and no definite glandular masses project out. Ribs normal.

Left: A moderate increase in lung markings especially in the lower half of lung field, converging to the hilus which shows moderate increase in size. Diaphragm normal. No pulmonary pathology.

An oblique film showed a localized area of density within the hilus opposite the 7th. and 8th. dorsal vertebrae, probably conglomerate hilus glands. The lateral film showed slight obliteration of the retrocardiac space in the superior mediastinal region.

A film taken with heavy penetration showed the glandular mass to be rounded. There was also another rounded discrete area in the posterior mediastinum.

Examination of the oesophagus by means of barium did not show any obstruction or displacement.

X-ray of the teeth showed two apical abscesses.

Temperature was 101°, pulse 108 and respirations 22 on admission and maintained this general level during the period of hospitalization.

Urinalysis—normal.

Sputum—saliva only.

Hb. 74%: R.B.C. 4,350,000; W.B.C. 5,800.

Polymorphonuclears 46%; eosinophiles 8%; Lymphocytes 40%.

Transitional Cells 6%.

Kahn test—negative.

Blood sugar (fasting) 130 mgm. per 100 c.c. whole blood. Blood urea, normal.

Sedimentation Rate, moderately rapid; 40 minutes.

Widal negative for B. Typhosus, para-A & B, Br. abortus and Br. melitensis.

On September 4, 1936, a small gland was removed from the right supraclavical space for a biopsy. The pathological report was "a typical hyperplastic type of tuberculosis with abundant tubercle follicles and large giant cells, but very little caseation." The appearances do not suggest Hodgkin's Disease, lympho-sarcoma, secondary carcinoma or malignant melanoma.

On September 14, 1936, she was sent home to continue treatment. The diagnosis was Mediastinal Tuberculous Lymphadenitis, Organic Heart Disease and Dental Caries.

However, her health gradually failed and she died about the last of March 1937.

Autopsy revealed the following findings—

The large mass at the root of the right lung proved on histological examination to be a large spindle cell or fibrosarcoma. It had infiltrated into the right pulmonary artery and also the right lung at its hilus. In the left lung in the lower lobe at the base was a secondary tumour nodule and in the right lung a small haemorrhagic infarct. The mediastinal and bronchial glands were extensively infiltrated. The tumour apparently arose from the bronchial wall or from the connective tissue of the pulmonary artery.

The pancreas showed no gross or histological evidence of disease and the spleen was enlarged to twice its normal size, soft, congested and toxic.

Re-examination of the gland removed from the neck in October 1936 still confirmed the previous diagnosis of hyperplastic tuberculous lymphadenitis.

It is interesting to note how well the autopsy upheld the cardiac diagnosis of right sided preponderance and obstruction of the pulmonary vessels. The concurrent existence of two entirely different pathological processes within a single chain of glands is very unusual.

J. E. HILTZ.

Case of Gas Gangrene

R. C., Age 54. Farmer.

On June 2, 1937, this patient came to my office complaining that his hand had a "funny, papery feeling". He did not complain of any pain. That day while working on his farm, he ran a knife into his hand between the thumb and index finger of his left hand, slightly nearer the palmar surface than the dorsal.

On the back of his hand near the base of his thumb faint crepitations could be detected by palpation. Two hours later the whole of the extensor surface of his forearm and the back of his hand was involved and crepitations were more marked.

An operation was performed immediately (Dr. H. E. Killam in consultation). Twenty incisions, varying in length from two inches to ten inches, were made on the back of his hand and the extensor surface of his forearm. All incisions extended through the skin and subcutaneous tissues right to the muscles but not into them, because the muscles were apparently not involved.

The whole area was irrigated every ten to fifteen minutes with hydrogen peroxide for four days. After that they were continued but not so often.

No injections of hydrogen peroxide were made because we felt that the incisions were sufficient to allow the hydrogen peroxide to get near enough to the infected tissues.

A prophylactic dose of tetanus anti toxin was given.

Gas Gangrene anti toxin—10,000 units Perfringens anti toxin and 10,000 units Vibrion Septique anti toxin (combined)—was used. This is considered one therapeutic dose. Every six hours such a dose was given intramuscularly for four doses, then one dose a day for three doses, seven doses in all.

For two days the arm was worse. There was more swelling of the arm, the skin and skin edges had a dirty grey colour and crepitations were more marked. After four days, the appearance was much improved and crepitations were detected in only a few small areas. At no time did the condition extend beyond the elbow, to the flexor surface of the forearm, or to the palm of the hand. His highest temperature was 100° F. In nine days he was discharged from hospital.

B. Welchii (B. Perfringens, B. Aerogenes Capsulatus) is one of the most common causes of gas gangrene. It is a sporulating anaerobic organism and is a common inhabitant of the intestinal tract of man and animal. Vibrion Septique, another sporulating anaerobe, is rather frequently associated with B. Perfringens in cases of gas gangrene. Both organisms are found in garden soil, dust, etc. The organism in this case was from the soil or an animal which the patient had killed that day.

Infections of this type were common during the World War. In civil life it is rare and when it does occur, it is usually a complication of a compound fracture.

A slight serum reaction was experienced which was treated with adrenalin and calamine lotion.

In three weeks, recovery was complete.

R. A. MOREASH,
Berwick, N. S.

Rupture of Urethra

W. L. Age 66. Farmer.

On Jan. 21, 1937, the patient fell from the loft of his barn. The distance was about twenty feet. The injury was attended by a considerable degree of shock.

The next day he was taken to hospital. The lower part of his abdomen, penis, scrotum, perineal region, gluteal regions, and lumbar regions of back were all bruised. He was bleeding from the rectum. No tearing or any serious damage was found on examination of the rectum.

His urine was blood stained for two days. On one occasion, it was necessary to catheterize him. The catheter passed easily into the bladder.

X-ray examination revealed no evidence of fracture of pelvis or any other bone.

In two weeks he was discharged from hospital and his condition was considerably improved. He was passing his urine normally and there was no sign of any extravasation.

About two weeks after patient went home, I received a call informing me he was passing his urine through his back passage. I found when I examined him that part of his urine was coming through the penis and part from a point just in front of the anus and slightly to the left of the mid line. In addition to this, urine had extravasated into the surrounding tissues.

This opening from which the urine was coming led to a cavity just in front of the triangular ligament. The fascia of Colles was damaged and in this way the urine was able to escape into these tissues instead of having its course determined by this fascia.

Patient refused to have an operation to correct this trouble but under local anaesthesia, the areas with extravasation of urine were freely incised and hot applications were applied.

On Feb. 25, 1937, patient had trouble passing his urine. Only with great exertion was he able to pass any and then the stream, noticed coming through the triangular ligament, was as fine as that seen when water is forced through a hypodermic needle.

So great was his distress that he decided to have an operation. However, he absolutely refused to go to the hospital. His refusal met with the approval of the rest of the family.

Things were arranged in the house to approach hospital conditions as best we could. The operation was performed on that day.

We (Dr. Bethune assisted me) were unable to find the urethral opening in the triangular ligament either with a catheter or a fine probe. However, an idea of the smallness of the existing opening can be obtained from the size of the stream.

This meant a supra pubic operation and a retrograde catheterization. This was attempted under local anaesthesia but we were obliged to give him a general anaesthetic. Chloroform was used and it was given by the nurse.

By percussion we could not determine the exact location of the bladder, yet we had reason to suspect that the bladder was full.

It was necessary to open the abdomen. When this was done, the bladder, full, was found away back in the pelvis and abdomen in an abnormal position. The bladder was pulled forward and sewn to the peritoneum of the anterior

abdominal wall. This union was made as tight as possible to prevent leakage of urine into the peritoneal cavity. The bladder was opened.

A sound was passed from the bladder through the prostatic urethra to the point of stricture in the triangular ligament. The stricture was broken down by the sound. A catheter had previously been passed through the urethra from the penis as far as the triangular ligament. This catheter was attached to the end of the sound and drawn through into the bladder.

The supra pubic opening was closed with drainage. It healed in about ten days.

The damaged tissue in the perineal region was cleaned and freshened. Few sutures were used and the resultant cavity was packed with gauze at lease once a day. The patient was given *urosine* three times a day.

In two weeks the catheter was removed. I was unable to introduce another rubber catheter. However, a large Wishard catheter was passed into the bladder.

The catheters were changed every two to seven days according to the greatness of the need. On three occasions the catheter was blocked by small, flat stones.

Around the middle of May, about five months after his accident, the perineal cavity was small enough to allow removal of the catheter. About one week after its removal, all the urine was coming in the normal way. He had some frequency which was due in part to the diminished capacity of his bladder caused by continual drainage by catheters.

Since that time, the man has been able to do his work on the farm.

Urethral dilators were used to prevent stricture formation. LeFort's taper point metal sound with filiform guide was used. The use of the filiform guide lessened the possibility of damaging the repaired urethra. The patient has objected to this treatment but it should be continued for some time.

R. A. MOREASH,
Berwick, N. S.

CANCER SECTION

CONCERNING CANCER

ARTICLE III

GEORGE H. MURPHY

OUR consideration of Cancer Control seems to have reached a point where we can follow Mr. Euclid's technique and set down a few axioms. If they are not quite as self evident as his, they are at least substantial enough to support a good working hypothesis. They are in keeping with the things we know for sure of cancer. If one but limps on a well blazed trail he is more likely to arrive than if he flew directions where hope alone shed its uncertain rays. "Our fault, dear Brutus, lies more in ourselves than in our stars." Let us approach the cancer question with as much realism as conditions permit. Jenner found in the cow stable the stuff that saved the world from smallpox, although he and his posterity have had a heck of a job to put the thing over. But our axioms:

I. Cancer, once started, never turns back.
II. It can be stopped and destroyed only near the starting point.
III. This vitally strategic bit of the course must be known to all.
IV. Early recognition of danger must become a simple, routine habit among the people.
V. Governments, doctors and organizations must cooperate in an intensive education to this end.
VI. Simple, direct teaching on how cancer begins and its first signs is the keynote of control education.
VII. Competent scientific facilities for exact diagnosis and modern treatment must be within reasonable reach of all.

All very old stuff, you will say; but the wise old trail blazer of our school days who guided us through the bewildering maze of triangles, circles, parallelograms, and what not, was satisfied with self evident truths, as old as the first performance of human reason. No daily newspaper correspondent, up to the present, has called his axioms into question by suggesting that the voluminous findings of some remote investigators were at variance with the old fashioned notion that *things that are equal to the same thing are equal to one another*. Within the limited sphere in which they are employed, these few axioms on cancer control seem self evident enough.

What kind of education should be brought to the people on cancer control? One of the perversities of the situation is that it is much easier to describe the kind that should not be given. For instance, those lurid, horrible stories of the sufferings of the cancer victim do no good, and most of the time, they are not true. Coloured screening of certain advanced cancer lesions and too graphic word painting may leave an already fearful lay audience with

visions of corpses and the stench of decaying human flesh, thus defeating the primary purpose, which is to develop an orderly intelligence along the lines of close and cheerful observation of the early signs of the disease.

Then, there is the erudite type of instructor. He is the one that forgets how long it takes even the medical student to get the language of the biological sciences and familiarize himself with clinical nomenclature. And so he mounts a rostrum, and gives a highly technical address to an audience mostly untaught in his medium of expression. Like the man in the gospel, the second state of such an audience is likely to be worse than the first. The largest public gathering I ever saw under one roof, some twelve thousand persons, was addressed on such subjects as tuberculosis, cancer and other ailments, by some of the world's outstanding medical and surgical experts. Much of the value of this great opportunity in public health was lost by some of the speakers forgetting the first essential of good teaching, namely, simple, orderly presentation in language familiar to their hearers. I recall a staunch, old friend of other years, an ardent Irishman, who went to a lecture on St. Patrick. The lecturer, a bright, young French curate, was long on history of the Saint, but woefully short on his knowledge and use of English. Asked how he liked the lecture, the old man replied; "I think he knows an awful lot about St. Patrick, he seemed so sure of himself; and I believe a good, honest follower of this holy missionary, but, tho' he spoke for over an hour, I did not understand a thing he said." The highly technical public lecture on cancer is not real food. Better the learned instructor gather up the twelve baskets of fragments, left from the scientific miracle, and feed them wisely to the multitude, if he would save them from fainting on the way.

I suggest, too, that much of the literature for public consumption on cancer is subject to the same criticism. After all, the general run of people are not interested in experiments on mice and guinea pigs. Nor are they interested in descriptions of different forms of treatment with abundant statistics to indicate the superiority of one over another. A lot of details only becloud and tire the mind untrained in systems and technique. What teacher in a miscellaneous school ever started to read Hamlet to her class in the alphabet? The public is a big miscellaneous school as far as cancer is concerned, and there is a goodly portion in the A. B. C.'s. The wise teacher will economize in time and opportunity by focusing a large portion of effort on the lesser equipped of the school.

If we are to have a nation wide educational crusade in cancer control nothing can be more important than the work of the committee whose duty it shall be to devise and appraise the spoken and written departments of teaching. I believe it is possible to tell the story of the cancer cell so as to interest the average citizen on its growth and migrations. In the form of a short article, an attempt was made in the January number of the *Dalhousie Review* to tell the A B C of our knowledge of cancer. While elementary, I think it is adequate enough to give people a sufficient scientific concept of the type of enemy they are called upon to fight. Perhaps the children should meet some such writings in their school books.

Simple direct instruction on ways of recognizing suspicious symptoms, with abundant repetition *of the end to be attained*, covers the whole scheme of any worth while plan of cancer education.

What is the end to be attained? *That the earliest signs of cancer may be observed and reported so that the victim may have a good fighting chance for his life.*

Abstracts from Current Journals

MEDICINE

SULFONAMIDE TREATMENT OF PUERPERAL FEVER

106 Cases Puerperal Fever—*Lancet*, Nov. 27/37. Colebrook and Purdee.

THE literature dealing with Sulfonamide and its allied compounds is very voluminous in all English and American Medical Magazines. The *Lancet* of above dates has several articles in which the authors find that this chemical compound has a definite bacteriostatic action upon hernolytic streptococci. The results in 106 cases of Puerperal fever are presented in which infection originated in the genital tract, post partum and post abortum. There were eight deaths.

Toxic effects of the drug were as follows:

Cyanosis: 58% had blueness of nails and malet prominences. In most it seemed to have no ill effect upon recovery or to cause any dyspnoea or cardial embarrassment. Improvement followed on withdrawal of the drug. Sulph-hemoglobismria was disregarded.

Agranulocytosis: One case in which the hemoglobin dropped from 68% to 54%, it was thought due to infection as well as to the drug. Apart from that case anaemia had not attracted attention.

L. R. M.

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100 Cases of Gonorrhoea treated by Prontosil—*Lancet*, Oct. 1937.

T. F. Crean, Genitourinary Specialist, Naval Hospital, Chatham.

Up to the present, the treatment of Gonorrhoea has been largely confined to the use of urinary astiseptus, irrigation of the urethra and treatment of complications as they arise.

For the last few years drugs of the sulphanilamide group have been tried in the treatment of many conditions with varying success. The successes obtained in meningococcal infections suggested use of this drug in treatment of cases of Gonorrhoea in view of similar morphological characteristics of the meningococcus and gonococcus.

100 cases are reported of acute and chronic gonorrhoea. He concluded that treatment by Prontosiol soluble and Sulphanilamide, combined with irrigations proved efficient in 90 out of 100 cases of Gonorrhoea, acute and chronic. In a favorable case of acute gonorrhea, cure is obtainable in about 15 days. Toxic effects were noticed in only two cases. A review of the cases suggest that Prontosil will revolutionize the treatment of gonorrhoea. It has reduced the number of days of sickness to one third, and from an economic point of view, has proved its value over and over again.

L. R. M.

GOLD SALTS IN TREATMENT OF ARTHRITIS

Review of 100 cases—*Lancet*, London, Oct. 9137.

Treatment of arthritis by gold salts has been empirical. Gold was first used in tuberculosis treatment and because arthritis was a chronic disease with many aspects in common in the two diseases it was tried out in arthritis eight years ago on the Continent and in England. Hartfall and associates report results of 900 cases of arthritis, 750 of which were rheumatoid arthritis, by chrysotherapy. They held the view that gold is the best simple treatment in rheumatoid arthritis. They are unable to predict toxic reactions, although they are investigating a patch test which appears to be giving promising results. The factors on which toxic reactions depend are still unknown, but from their experience feel justified in drawing certain conclusions: Certain individuals show an idiosyncrasy to gold, developing multiple reactions after small doses and these are, presumably, unsuitable for treatment. In others there are, no doubt, several factors. Dosage is of importance. Their impression is that the maximum dose should not be more than o.1 gram and a course of injections should not consist of more than 1. g. It is probable that some preparations of gold are more toxic than others. Age and sex, severity and duration of the disease appear to have no bearing on the frequency of the reactions.

There are few real contra indications; any history of purpura in agranulocytosis appears to be an absolute contra indication, also gross renal in hepatic disease.

Rheumatoid arthritis, if seen early, can be cured by gold salts, and few, if any, cases of the disease cannot be improved. Any acute monarticular arthritis should be regarded as a forerunner of widespread and severe rheumatoid arthritis. Every patient should have, at least, two courses of injections and a persistently raised blood sedimentation rate is an indication for further treatment with gold salts.

L. R. M.

Correspondence

Antigonish, N. S., January 28th, 1938.

The Editor,
The Nova Scotia Medical Bulletin,
Halifax, N. S.

Dear Sir:

Your courteous reply to my letter which appeared (at some inconvenience) in the December issue of the BULLETIN has completely disarmed me.

I take this opportunity to tell you that I purposely refrained from making any reference to the many good points contained in your editorial (October issue) and to make public acknowledgment of any injustice I may have done you while in an aggressive and critical mood. It appears that many men of my clan are unyielding and I am therefore very glad of your decision to close the discussion, and I quite agree with you "there would probably be little to be gained and possibly a good deal to be lost by further discussion." I know full well that your aim was to get some practical way of eradicating the great "social evil", and I thank you for guiding me to the article entitled "Prevention of venereal disease in Sweden" and your own article—both inspiring and serious propaganda.

I reciprocate your generous tribute, and I hope it will indeed be a long time, in your case, before "the eye becomes dim or the natural force abates", and that your facile and fearless pen, for many long years, may fling many a drop (not a drop for "trimmings") is the wish of

Yours very truly,
(Sgd.) J. J. CAMERON.

PHYSICIAN WANTED

A request has been received by the Secretary to secure a Doctor for a prosperous farming district, approximately two hundred and fifty families, within a radius of ten miles. Further information on request.

PHYSICIAN WANTED

There will be an opening for a physician beginning in May at Badger, Newfoundland. The work is part Company practice and partly private. Salary $175.00 a month, plus living expenses. Further information through the Secretary.

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. C. J. W. BECKWITH, D. P. H., 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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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 January 1st, to February 1st, 1938.

During the month, 250 tissues were sectioned and examined, which, with 75 tissues from 14 autopsies, makes a total of 325 tissues.

Tumours, simple	20
Tumours, malignant	32
Tumours, suspicious of malignancy	7
Other conditions	191
Tissues from 14 autopsies	75
	—325

Communicable Diseases Reported by the Medical Health Officers for the month of January, 1938.

County	Chickenpox	Diphtheria	Influenza	Measles	Mumps	Infantile Paralysis	Pneumonia	Scarlet Fever	Typhoid Fever	V. D. G.	V. D. S.	Whooping Cough	Impetigo	Epidemic Jaundice	German Measles	Catarrhal Jaundice	Acute Infectious Mononucleasis	Septic Throat	TOTAL
Annapolis	..	..	2	..	..	2	1	..	..	2	..	1	..	..	..	..	..	..	8
Antigonish	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Cape Breton	..	6	..	..	..	..	..	38	..	..	1	..	..	6	..	..	..	..	51
Colchester	26	..	..	4	6	..	1	..	..	..	..	..	..	..	..	..	..	..	37
Cumberland	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Digby	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Guysboro	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Halifax City	..	5	..	1	..	..	..	9	1	..	..	..	..	..	..	..	..	..	16
Halifax	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Hants	..	..	..	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	3
Inverness	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Kings	6	1	14	2	..	..	..	3	..	4	..	..	..	..	1	..	..	..	31
Lunenburg	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Pictou	..	..	..	..	..	..	1	..	..	..	1	..	..	..	..	..	6	..	8
Queens	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Richmond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Shelburne	..	..	..	45	..	..	..	..	..	1	..	..	..	..	..	..	..	..	46
Victoria	..	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	..	2
Yarmouth	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
TOTAL	33	12	16	52	6	2	6	52	1	7	2	1	..	6	1	..	6	..	203

Positive cases Tbc. reported by D.M.H.O.'s. 13.

RETURNS VITAL STATISTICS FOR DECEMBER, 1937

County	Births		Marriages	Deaths		Stillbirths
	F	M		F	M	
Annapolis	9	5	22	6	9	0
Antigonish	8	13	5	5	3	0
Cape Breton	113	130	133	35	35	4
Colchester	26	16	28	9	15	1
Cumberland	27	27	51	15	23	1
Digby	13	13	14	6	7	0
Guysboro	10	16	11	3	8	0
Halifax	78	95	90	60	62	5
Hants	12	15	20	7	13	0
Inverness	20	23	18	6	5	1
Kings	17	9	42	12	15	0
Lunenburg	25	15	32	15	14	0
Pictou	33	26	35	12	10	0
Queens	7	9	11	4	7	0
Richmond	7	6	3	4	5	0
Shelburne	15	12	12	10	11	
Victoria	10	4	4	4	4	0
Yarmouth	21	23	7	10	11	0
	451	457	538	223	257	12

OBITUARY

THE death of Dr. Joshua Newton Mack, the oldest member of the profession in Nova Scotia, occurred suddenly at his residence in Halifax on February 7th in his 94th year.

Born in Mill Village, Queens County, in 1844 he received there under able schoolmasters of the old style such a thorough course of instruction in classical subjects that he was able to matriculate at Harvard Medical School. Among his instructors there was Dr. Oliver Wendell Holmes who was professor of anatomy. Called home by the prolonged and fatal illness of his father his medical course was interrupted. When able to resume it he went to Bellevue Hospital Medical College, New York, graduating in 1875. Such men as E. G. Janeway, Lusk, Sayre, Doremus and Austin Flint, senior and junior were his preceptors.

Shortly after graduation, in response to an urgent telegram from the people of Grand Bank and Fortune, two villages on Fortune Bay, Newfoundland, whose doctor had just died, he went there and found an epidemic of diphtheria raging and many dead. This was before the discovery of antitoxin and the only treatment was by energetic and repeated applications to the throat. Aided by his extraordinarily painstaking care and constant attention many recovered and up to the end of his life he received evidences of affection and esteem from men and women who were children when he went there.

About 1887 Dr. Mack returned to his native province settling in Bridgewater from which a few years later he removed to Lunenburg. Leaving there in 1900 he went to London, New York and Baltimore for a year of post-graduate study. While in Baltimore he enjoyed the friendship of the late Sir William Osler. Returning to Nova Scotia he established a practice in Halifax from which he retired about twenty years ago following a severe illness. After forty-three years of faithful service he was fortunately able to find great enjoyment in his garden beautifully situated near Point Pleasant Park on property which had been in the possession of his family for over a century.

Dr. Mack was the son of Jason and Augusta (Miller) Mack of Mill Village. A brother Hon. Jason Mack, President of the Legislative Council, and a sister Mrs. John R. Creed predeceased him some years ago. His widow the former Miss Susan Wilson of Pictou, whom he married in 1888 and two sons Dr. Frank G. Mack and Frederick N. Mack both of Halifax survive him.

The feelings of those who knew him are well expressed in these words from an editorial notice in the *Halifax Herald*:—"A man of genial personality, widely read, and a great lover of nature, Dr. Mack through his long and honored life was everywhere greatly beloved and esteemed. He was a family physician of the old school, conscientious, thoughtful and sincere; and in countless homes throughout the Maritimes his name still continues in grateful remembrance.

A Christian gentleman and a true citizen, Dr. Mack served his day and generation faithfully and well and has left behind him a rich legacy of fragrant memories and noble influences which will long abide."

Personal Interest Notes

Minister of Health talks on Periodic Health Examinations.

ON Monday, January 24th, Dr. F. R. Davis, Minister of Health, addressed Kiwanis Club of Halifax on "some phases of medical health". Dr. Davis in his address first reviewed tuberculosis in our province. He spoke about the attitude toward the disease at the time when preventive measures were first instigated and showed the steady decline in tuberculosis up till the present time. He predicted that with the continuance of the present measures, that is increased sanatorium facilities, travelling clinics and public health nurses, there should be a steady decline in tuberculosis for some years. Following this the Minister pointed out the importance of public sentiment in allowing public health insurance to be carried out against disease.

Dr. Davis then dwelt on the significance of the degenerative diseases, such conditions as nephritis, arterio sclerosis, cancer, and expressed the opinion that although our knowledge was not so definite on the etiology and methods of control on this important group of diseases that the knowledge we had, should be applied to a much greater extent than at present existed. Dr. J. W. Merritt was chairman for the day.

Immunization Campaign under way in Halifax.

The Halifax Branch of the Medical Society of Nova Scotia together with the Halifax City Board of Health and Dalhousie University Public Health Clinic have established clinics in Halifax for immunization against diphtheria. At present there are four such clinics conducted a week; two are held at the Dalhousie Public Health Clinic for the convenience of people living in the south of Halifax, and two clinics at the Victorian Order Health Centre for the convenience of those living in the north. So far the response has been very gratifying. The average attendance at the clinics run from seventy-five to one hundred and fifty. These clinics have been arranged for the benefit of those who cannot afford to pay the private physician for such service. Through the press and also through our nurses, others have been advised to have their children immunized privately. The clinics will be conducted so long as the attendance justifies it.

Medical Dental Library for Dalhousie.

A medical dental library will be built by Dalhousie University and should be completed before the beginning of next term. Already the University has had expert advice from some of the best medical librarians on the continent. Plans have been drawn up and it is expected that the corner stone will be laid sometime early in April. The new library which will cost somewhere in the vicinity of $100,000.00, will fill a much needed want, not only to the medical and dental students at Dalhousie Medical School, but also to the physicians of Halifax and of Nova Scotia.

Tuberculosis Annex urged by Colchester County Health Officer.

Dr. T. R. Johnson of Great Village, County Medical Officer for Colchester, in his annual report to the Colchester Municipal Council, pointed out the necessity for a tuberculosis annex to the Colchester County Hospital. Dr. Johnson also referred in glowing terms to the work of the Colchester Anti-Tuberculosis League.

The BULLETIN is glad to know that Dr. W. R. Dunbar of Truro, who has been a patient at the Colchester County Hospital, for the past few weeks, is sufficiently improved to permit his removal to his home on Prince Street.

Dr. and Mrs. R. Evatt Mathers of Halifax left during the early part of February to spend the next two months in California.

Doctor wanted for a thriving practice in a good rich district Apply to the BULLETIN office.

OBITUARY

Dr. David S. Sutherland, a graduate of Dalhousie, 1925, died suddenly at Halifax on the morning of January 26th. Dr. Sutherland was born at River John. He received his early education at Pictou Academy and from there came to Dalhousie where be completed his medical education. He enlisted during the Great War at the early age of fifteen, but was sent back to Canada. Dr. Sutherland first practised at Seabright and later for a number of years at Chester. In 1936 he entered the British Colonial Service and took up residence at St. Kitts. In the early part of January he returned to Halifax on account of ill health. Dr. Sutherland is survived by his wife and two children, also his parents, all at River John.

The death occurred at St. John's, Newfoundland, January 8th, of Dr. David C. Johnston. Dr. Johnston graduated from Pictou Academy about fifteen years ago and later studied medicine at Queen's University, Kingston, Ontario. Dr. Johnston is survived by his wife, formerly Miss Muriel MacKenzie, R.N., of Pictou, and his son, Douglas.

FOR IMMEDIATE SALE

A forty-five year established, unopposed, Town and Country practice, 2,500 to 3,000 patrons, with 20 mile round trip. Ten labor employing establishments with Workmen's Compensation privileges, also a lucrative and growing sick seamen's service. Hospital within two hours drive. Property and office outfit at below cost. Terms easy. Reason health. Anyone interested communicate with the secretary.