

# Duodenal Ulcer: Some Practical Considerations for the Practitioner\*

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THE subject with which I dealt yesterday afternoon and this morning, allergy, is one about which the general practitioner's information is perhaps somewhat vague. Furthermore, his text-books won't help him because none of the one-volume texts on medicine gives anything like an adequate account of allergy. For that reason I tried to cover the subject in a more or less systematic way. Duodenal ulcer, on the other hand, is a subject about which every practitioner knows a great deal. He has had a lot of actual, first-hand experience with it. Moreover, all the text-books contain a very satisfactory description of duodenal ulcer. Therefore, I shall approach my subject to-day somewhat differently, in that I shall dwell rather on certain points which to me seem to be worth emphasizing.

The *etiology of duodenal ulcer*, in spite of all the study that has been spent on it, is as yet obscure. Nevertheless, there is a good deal of theory about the etiology, theory that at times is plausible and worth taking into consideration in the management of patients with this disease.

It will be generally admitted that those who get duodenal ulcer have an inborne constitutional defect, of whose nature we are ignorant, but which we may at times recognize in peculiarities of structure and function.

Thus the constitutional tendency often enough shows itself in the habitus, the outward appearance of the individual. The ulcer patient is apt to be slender in build, with a face that is long and narrow, chiefly because the angle of the jaw is obtuse, not a right angle. His dental arch is a rather pointed one, so that only a few somewhat longish teeth are seen from the front. His neck is long, his costal angle is acute, and his arms and legs are longish. With this build goes a temperament that is inclined to be on the high-strung nervous side. The patient does his work by fits and starts. His mood alternates between gloom and elation. He is inclined to insomnia. He usually has much initiative and he accomplishes a great deal. Among others, Draper has given us an excellent description of this type of individual in his book "Disease and the Man", an exceptionally interesting volume which I recommend to you. But others have recognized this type long ago. Shakespeare describes it very well. Let me remind you of the words of Julius Caesar, as he observes some of his political enemies and then remarks to Antony:

"Let me have men about me that are fat;  
Sleek-headed men and such as sleep o' nights;  
Yond Cassius has a lean and hungry look;  
He thinks too much: such men are dangerous."

(Julius Caesar—Act 1)

Cassius had a duodenal ulcer.

It has been suggested that the ulcer patient has certain peculiarities of function that go with this habitus, such as more active gastric acid secretion,

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a more active pyloric sphincter, and the like. It has been suggested that these physiologic peculiarities may have to do with an altered balance in the autonomic nervous system or even in the function of the endocrine glands. Here the evidence is as yet inconclusive.

Occasionally, the constitutional defect seems to be hereditary in that ulcers are at times seen to occur in several members of a family. This, however, is only occasional and heredity at most would seem to play a minor role.

Now this inherent defect is ineradicable. Surgery can alleviate it, often sufficiently to give the patient permanent symptomatic relief, but it never removes it. It is important that we recognize this point: once an ulcer patient, always a possible ulcer patient.

The constitutional defect is of course not the only cause of ulcer, otherwise all ulcer patients would have ulcers all the time. There are certain secondary causes which come into play in precipitating trouble in a given individual. I like to think of the matter in this way: the sum of (a) constitutional tendency, and (b) secondary causes must add up to one hundred per cent to produce ulcer in a patient. Now if the patient has a marked constitutional tendency, it will take less in the way of secondary causes to give him an ulcer. This would seem a logical explanation why some patients get ulcer more easily than others.

Again, it must be admitted that the so-called secondary or adjuvant causes of duodenal ulcer have by no means been fully proved. Nevertheless, we can speculate about them a little more freely, with greater assurance, and to considerable practical purpose.

*What we eat* undoubtedly should receive consideration. Constant overstimulation of gastric secretion may well result from the excessive use of highly seasoned foods, of alcohol, and meats. I am also inclined to think of salt as a possibility in this direction. I have long been impressed by the excessive use of salt which I have encountered in most ulcer patients. They are the individuals who never taste food as it comes to them on the plate before deciding whether salt is needed. They just reach for the salt shaker and then start a little snow storm over everything on the plate as the opening move in every meal. If excessive gastric acid has anything to do with ulcer information then perhaps the excessive intake of a chloride may be significant. I feel certain that a sharp reduction in salt intake is often followed by an excellent clinical result in these patients. As I pointed out yesterday in my discussion of allergy in the digestive tract, I am also convinced that in a small but definite proportion of duodenal ulcer cases food allergy plays a part. Such a cause should always be suspected if the patient himself or his family gives a history of obvious hypersensitivity, and if the ordinary measures of ulcer treatment, including surgery, fail to give permanent relief.

*How we eat* our food is also of importance. Food that is bolted, places on the stomach the burden that the teeth should have borne. Food bolted when the patient is in a nervous high-strung pre-occupied state is likely to encounter a stomach less prepared than the normal for the work of digestion.

This leads naturally to the next factor to be considered, *nervous tension*. Nervous tension is undoubtedly of importance in this disease. If rats are frightened often and severely enough, they develop ulcer. The incidence of duodenal ulcer will probably be found in a curve that is the reverse of the stock market. I wonder if duodenal ulcer is not distinctly on the increase

in our generation, in keeping with the increasing nervous tension under which most of us live. Conversely, ulcer is seen less frequently among primitive peoples. It is comparatively rare among the negroes as we see them in the States.

Focal infection, I feel sure, is a factor in many cases. The doctrine of focal infection has undoubtedly been overworked on this continent, and one stands aghast at the untold numbers of teeth and tonsils that have been sacrificed to this medical fetish. And yet, I am convinced that there is conclusive clinical and experimental proof of the etiologic role that focal infection plays in the causation of duodenal ulcer.

The type of focal infection most likely to be encountered is tooth root infection. There appears to be a good mechanical explanation for this. A tooth in its bony socket with infection at the very tip of its root is not unlike a loaded hypodermic syringe. When you consider that each time you bite on a tooth you bring a pressure to bear on it of 150 to 200 pounds, it is not hard to understand how even a tooth, apparently tight in its socket, can nevertheless move downward into the socket ever so slightly and so force a bit of infected material into the lymphatics. The evidence for focal infection has best been presented by Russell L. Haden in his little volume published a year ago, "Dental Infection and Systemic Disease".

*Tobacco*, I am convinced, is probably also a factor in some cases. I wonder if by any chance the question of the relationship of duodenal ulcer to tobacco may prove to be similar to that in certain other conditions where tobacco plays a part. I am thinking of Buerger's disease and coronary disease, the former almost entirely limited to men and the latter largely so. In both conditions, particularly in Buerger's disease, excessive smoking, especially of cigarettes, undoubtedly can be a cause, if not a major cause of trouble. Yet, in both of these conditions, there has been observed recently an increasing number of cases among women, and these have usually been women who smoked excessively. Perhaps there may be a similar increase in the incidence of duodenal ulcer among women as excessive smoking becomes more prevalent among them. To-day the incidence of duodenal ulcer in men is four times as great as in women.

Then of course there are always *individual factors*, factors in the patient's own life and environment which we must never forget to look for. They may range from seeming trifles of business detail to a cantankerous mother-in-law or a mortgage about to be foreclosed. At this point, I wish to stress an extremely important matter in duodenal ulcer, and that is, in the management of the patient with duodenal ulcer, one must individualize. You must know as much as possible about the details of your patient's habits and background. In this regard, the general practitioner has an enormous advantage over us who work in hospitals and who are not in such close contact with our patients and their families. I said a moment ago that seeming trifles might even play a part in our cases. Several years ago, Dr. Einhorn reported on the factors that seemed to bring about a recurrence of ulcer. His number of patients and his observations were sufficiently large and extensive that the figures could stand statistical analysis. He found that ulcer recurred oftener among those who wore belts than among those who wore suspenders.

Turning now to *diagnosis*, it is still as true as it was twenty years ago that Moynihan said that the *history* is the most important thing in the diagnosis of duodenal ulcer. But, as you well know, history is not infallible, and there

are a number of possible pitfalls. In the first place, we must know what constitutes a typical history of duodenal ulcer. Most medical students and not a few practitioners make this mistake: when asked the symptoms of duodenal ulcer, they enumerate: epigastric pain, sharply localized about half way between the xiphoid and the umbilicus, occurring an hour or two after meals, and relieved by the taking of food or alkali. Those symptoms do not spell duodenal ulcer. They are simply the symptoms of pylorospasm and the hyperacidity that goes with it. Those symptoms may be brought on by many causes, including chronic constipation, gall bladder disease, subacute recurring appendicitis, food idiosyncrasy, excessive smoking, and the like. What makes duodenal ulcer out of the story is that the above mentioned symptoms recur meal after meal and day after day for a period of weeks or even months; to be followed by a symptom-free interval that may last for weeks, months or more; an alternation of protracted periods of symptoms and protracted symptom-free intervals that we refer to under the term periodicity. Then, of course, as you well know there are occasional cases of duodenal ulcer in which symptoms are either so vague as to be useless in diagnosis or in which there are no symptoms whatever. Let me remind you of the patients whose first inkling of trouble is a severe hemorrhage or even a perforation.

*Physical examination* adds comparatively little beyond disclosing, as a rule the habitus, the physical configuration above mentioned as usually found in these patients.

At this point I am going to insult your intelligence in the hope of getting across a point. Any patient who has any symptom referable to his digestive tract, whether it be loss of appetite or itching piles, deserves a rectal examination. Yet, unless you make a rectal examination routinely, you will sooner or later make a tragic mistake. Here is a case in point: a patient gave a typical history of duodenal ulcer, the X-ray findings were characteristic of duodenal ulcer, the occult blood found in the stool was of course believed to be coming from the ulcer. The patient came to operation and was found to have a duodenal ulcer. However, at the operation, an inquisitive surgeon reached into the pelvis and found a rectal carcinoma as big as your fist. The patient died within a week of post-anesthetic pneumonia. Yet, had a rectal examination been made and the carcinoma found, we would have X-rayed his chest and discovered the metastasis to his lungs and we would therefore never have subjected him to a prolonged ether anesthesia.

*X-Ray* is of course extremely valuable in diagnosing duodenal ulcer. But, here too, we must be mindful of possible shortcomings in the method. We must remember that the value of the examination depends primarily on the skill of the roentgenologist. As you all know, this is a type of examination that requires long experience. Moreover, there is no absolute unanimity as to what findings warrant a diagnosis of duodenal ulcer. The finding of a clear-cut niche is of course diagnostic. The finding of a deformed duodenal cap in all of a considerable number of serial exposures is almost diagnostic of ulcer, since deformity of the cap due to extra-duodenal adhesions is really quite rare. Changes in the gastric peristaltic rhythm and in pyloric sphincter activity may be very helpful, but they are not diagnostic nor does their absence rule out ulcer. The X-ray is certainly not infallible. If we remember that ten per cent of the ulcers are on the posterior wall of the duodenum, and that acute small ulcers without callous formation, the type so often giving rise to

hemorrhage, will not always deform the cap, we can appreciate the type of case which the roentgenologist misses. Under such circumstances the history commonly can settle the diagnosis. I can recall a patient who, at X-ray examinations a month apart, gave negative findings, yet half-way between the examinations he had a typical massive hemorrhage and at operation a week after the second X-ray was found to have an ulcer.

I will mention two other procedures that are helpful in the diagnosis of duodenal ulcer. With the first you are all familiar: the repeated finding of *occult blood in the stool*, the patient being on a meat-free diet. The other is one not much employed nowadays, perhaps because it is so simple: the old *string test*. In this procedure a lead shot is fastened to the end of a heavy silk string about one meter long. The shotted end is placed in a capsule which the patient swallows in the evening, the other end of the string being looped over the patient's ear and fastened with adhesive. A knot is made in the string where it passes the incisor teeth. The next morning the string is withdrawn and examined. If it has passed into the duodenum it will be bile-stained from a point beginning about 65 centimeters beyond the incisor teeth, this being about the location of the pylorus. If the string has lain in contact with an ulcer, then about 1 centimeter of the string at the point of contact will have a brownish discoloration due to blood and this can be confirmed by doing the usual occult blood test on the spot which then turns dark blue. In my experience, it has been possible on several occasions to localize a duodenal ulcer that was not found by X-ray. A false reaction is at times given at the point where the string passes through the pylorus because of a sawing action at this point.

If discussion and argument have waxed hot over the subjects of etiology and diagnosis, they are nevertheless as nothing compared with the rivers of ink that have been spilled about the *treatment of duodenal ulcer*. Houston in his recent book, "The Art of Treatment",—an excellent work which I recommend to all of you—remarks that over a hundred methods of ulcer treatment have been advocated. The argument in the past has been particularly heated over the question, *what are the indications for surgery in duodenal ulcer?* Being far from home and therefore uninhibited by possible criticism from my surgical colleagues, and knowing that I shall leave your fair city within an hour, I gleefully plunge into the midst of this argument. The views expressed are my own personal views, of the soundness of which I hope to convince you.

In any discussion it is always best to begin with something on which all concerned can agree. So I shall start my list of surgical indications with one about which there can be no question:

1—*Perforation.*

2—*Pre-perforation.* This may be suspected clinically in the patient whose pain becomes very much more severe and which is no longer helped by alkali. Sippy was right twenty years ago when he insisted that pain in an ulcer patient which was not completely relieved in forty-eight to seventy-two hours by adequate alkali was not due to uncomplicated ulcer. The X-ray may add further evidence to clinch the diagnosis of pre-perforation, in that it shows, beyond the niche, a slight mushrooming of the opaque material outside the muscularis. The opaque material in silhouette looks like a collar button, the stem of which is the ulcer crater, and the head of that portion of the ulcer

which has broken through the muscle, and is now in contact with the peritoneum. The intensity of the pain and its failure to be relieved by alkali are explained on the basis of a localized peritonitis.

- 3—*Repeated hemorrhage*: I will have more to say about this a little later when I consider the treatment of hemorrhage.
- 4—*Possibility of the presence of carcinoma*. Duodenal ulcer becomes malignant so rarely that the possibility may be ignored. However, gastric ulcer commonly becomes malignant. If a patient in the cancer-bearing age has an ulcer so close to the pylorus that the roentgenologist cannot be sure whether it is pyloric or duodenal, or if a patient in the cancer age happens to have both duodenal and gastric ulcer, then surgery should promptly be resorted to.
- 5—*Coexisting abdominal lesions requiring surgery*. One should obviously resort to surgery in a duodenal ulcer case if the patient also happens to have active disease of the gall bladder, or of the appendix, or other abdominal disease which in itself requires surgery.
- 6—*Obstruction*. Now at this point the argument begins. The first question which one must raise is, what is the cause of obstruction? You will agree that pylorospasm may be sufficiently severe to produce gastric retention and vomiting. One must then differentiate between such functional obstruction and a true organic obstruction. You may answer, that differentiation is easily made by giving the patient atropine or belladonna and noting the effect by fluoroscopy. That is true, but having so decided that organic obstruction is present, one has still to answer the next question: is the organic obstruction due to fibrous and scar tissue, or is it due to inflammatory reaction? Obviously, scar tissue will not change under medical treatment, but inflammatory tissue can regress under treatment and the degree to which it can change is amazing.

I once stood at the operating table with my chief, Dr. Carnett, in the case of a patient who had obvious and complete obstruction close to the pylorus. When the abdomen was opened there was found in the pyloric region a large irregular indurated mass which Dr. Carnett felt was obviously carcinoma. He pointed out the metastases in the neighboring lymph nodes in the gastro-hepatic omentum. Resection being out of the question, a palliative gastroenterostomy was done. The patient made a smooth recovery, gained weight by the day, and left the hospital in excellent condition. Two years later, he was again admitted into the hospital in the middle of the night. He was obviously in the last stages of peritonitis and died within a few hours of his admission. No pathologist being available, I performed the post-mortem very willingly, I assure you, for I was very curious to see what had happened to the lesion of two years before. The man had died from a peritonitis due to the perforation of a marginal ulcer at the site of the gastroenterostomy. Of the large pyloric mass, there remained not a single vestige, not even a scar. He, of course, had not had carcinoma but an ulcer with marked inflammatory reaction, all of which had completely cleared up.

But it might be objected that in our patient the inflammatory reaction had cleared up only after operation; so why quibble about

inflammatory versus cicatricial obstruction? Because I know that even considerable degrees of inflammatory obstruction can regress under medical treatment, although I fully admit that the results are obtained more quickly and much more surely by surgery. Occasionally, there are patients with organic obstruction who nevertheless refuse to be operated upon. The situation in them is not altogether hopeless, if the obstruction be inflammatory and not cicatricial.

I recall an interesting case in point: a man of 36 gave a history of typical ulcer symptoms of nine years' duration. During the last year, there had been increasing evidence of obstruction as shown by retention and finally daily vomiting of food, considerable loss of weight, and the like. In view of the long history and the high degree of obstruction, I felt that the lesion must surely be cicatricial and therefore demanding operation. Because of circumstances that demanded his continuing at work, he refused immediate operation but agreed to operation three months later. To my surprise, his symptoms cleared up completely under conservative measures and he is still in good health twelve years later.

7—*Failure of medical treatment.* This perhaps would better be stated as failure of *adequate* medical treatment. Here again, there is bound to be difference of opinion as to just what constitutes adequate medical treatment. I shall have a little more to say on this subject later, but at this point it should be stated that no treatment may be considered adequate which has not lasted six months.

8—*Relative indications.* There are a number of factors having to do with the patient's economic status, his temperament and his intelligence, which in the individual case will call for surgery when otherwise it might not be deemed imperative. Thus, the patient's economic status may be such that by submitting him to surgical treatment we may achieve an earlier cure than by more prolonged medical measures.

Not that the actual money outlay for the surgical treatment will be less than the medical; on the contrary, the reverse is usually the case. But for economic reasons, it may be difficult for the patient to get proper diet. Let me illustrate: before insulin was available, quite the most tragic situation was that of the single man with diabetes who had to live in restaurants and boarding houses. It was almost impossible for him to get a proper diet and consequently he rapidly went to death and destruction. In ulcer treatment, the situation is much the same. Therefore, in such a case, surgery may well be resorted to rather promptly. Then, there are patients temperamentally so constituted that they just can't stick to any prolonged scheme of treatment. Since ulcer treatment is something that must be considered not for weeks or months but for life, it is obvious that such patients will not do well in the long run on medical treatment. Then, there is the matter of intelligence. To get anywhere with medical treatment, you must have the intelligent cooperation of the patient. In the wards of city hospitals one is constantly encountering patients of low intelligence, who while they are on treatment in the ward do very well. Just as soon as they go home, however, they promptly slip back into their original bad diet habits, and in a short time are back in the hospital with their old symptoms. Again they are straightened out by proper care and again they go home and immediately fall from grace.

With such individuals it is foolish to waste one's time. Once they have demonstrated their inability or unwillingness to cooperate, they had better be referred to the surgeon.

All other cases of duodenal ulcer should be treated medically. And how many does that make? The answer is that all the above mentioned indications for surgery will nevertheless not include more than twenty-five per cent of all cases of duodenal ulcer. If all cases were treated properly from the start, the figure would be much less than twenty-five per cent. Even then, before you choose surgery in the twenty-five per cent, you will be influenced by the brand of surgery available in your community. While almost any cross-roads surgeon can take out an appendix and perform various relatively simple operative procedures, he might fall far short of the technical requirements made by surgery of the stomach and duodenum, requirements that are quite the most exacting in the whole realm of abdominal surgery. The availability or the non-availability of a *competent* surgeon must therefore weigh heavily in the balance.

Now let us take a look at another angle of this problem: let us see what a surgeon says are the *indications for medical treatment*. I quote these from that splendid monograph, "The Stomach and Duodenum", by Eusterman and Balfour and their associates, at the Mayo Clinic. We find that medical treatment is advised for:

- 1—*All early cases*. With this I am heartily in accord.
- 2—*The aged*. Duodenal ulcer is not a disease limited to the young. I have seen it begin in a patient at the age of seventy-two, and I have seen patients with ulcer in the eighties.
- 3—*Those with another serious organic disease that contraindicates surgery*: active tuberculosis, angina pectoris, diabetes, serious cardiac disease, pregnancy.
- 4—*The highly neurotic*. There spoke a wise surgeon. You have all seen such patients, high-strung, unstable individuals, whose numerous symptoms do not quite click with an organic diagnosis, suggestive though at times they may be. You have them X-rayed and the roentgenologist gives an equivocal report about some spasm here and a possible something there. At first you do not even consider surgery. But week after week, I should say year in year out, they come back to you with symptoms little altered and certainly not permanently benefited by your treatment. You resort to X-ray again and yet again, receiving a report that may be a little more suggestive than the earlier ones.

Finally, your resistance is worn down and more or less in desperation you advise surgery. Commonly, the surgeon finds little and accomplishes less. Not only do the old symptoms recur, but there are now added new ones: new symptoms which in the course of time may lead you or some other unwary clinician to a diagnosis of adhesions and yet another futile operation. Avoid operation in the neurotic patient unless there be the most clear-cut insistent indications.

- 5—*Those who refuse operation*. I wonder if any of you could confirm from your experience the impression which I have gained over the years: that the number of surgeons in this group is surprisingly high.



When surgery has been decided upon, the next question which arises is, *what type of operation shall be performed?* This, you will say, is primarily the problem of the surgeon, and so it is. When you stand at the surgeon's elbow, as he operates upon your patient, and asks, "what do you think we ought to do in this case?", you should promptly bow and reply, "I defer to your very superior judgment". Nevertheless, the internist should know at least enough about the surgical problems involved, so as to be able to speak intelligently on the subject, in reply to the surgeon's questions. I shall therefore enumerate a few of the fundamental principles involved.

- 1—*Surgery gets its best results in those cases in which there is interference with the motor function of the stomach.*
- 2—*Gastroenterostomy, therefore, gives its best results in those cases in which there is marked obstruction.*
- 3—*Conversely, in the absence of obstruction, gastroenterostomy alone is doomed to failure in three cases out of four.*
- 4—*Excision of the ulcer alone is never an adequate procedure.* Not only is excision alone a useless procedure, but it may actually be harmful, in that you may produce a stenosis where none existed before.
- 5—*Excision is however a desirable part of the whole operation in many ulcer cases, especially in those in which there has been repeated hemorrhage.*
- 6—Suppose the surgeon on opening the abdomen does not find the duodenal ulcer which you diagnosed. He inspects and palpates the stomach and duodenum with the greatest care but without result. What then? Please remember that the *search for ulcer is not completed until there has been an inspection of the interior of the viscus.* This can, of course, be done easily and without risk by the introduction of an endoscope through a small incision through the stomach wall. This procedure has disclosed an ulcer in the stomach or duodenum on many occasions when previous search had failed.
- 7—But suppose that after all possible devices have been employed, the surgeon still finds no ulcer. What then? Then the surgeon should have the good sense to do nothing to the upper digestive tract, and you should have the courage of your convictions to see to it that he does nothing. The most pernicious thing in abdominal surgery is, having failed to find a duodenal ulcer, nevertheless to perform a gastroenterostomy, with the excuse that it might do the patient some good, but chiefly for the reason that the surgeon is looking for some justification for having opened the abdomen in the first place. Such unwarranted gastroenterostomies rarely do the patients any good but commonly bring ~~forth~~ other symptoms in their train which will come back to haunt you. And, you will deserve it.

*Medical treatment.* Time does not permit that I go into detail about the medical treatment of duodenal ulcer. I shall only touch on some of the high spots that seem worthy of emphasis.

*The ulcer patient must be taught to take care of himself.* He should be taught, just as is the diabetic, that this care must be, not for months, for a year, but for life. He must realize that he has a fundamental defect, a tendency to develop ulcer far more easily than a normal person, a tendency which not even an operation can remove. All his life he should choose his food wisely, chew it well, he should not over eat, nor should he eat when he is tired.

The second point is *rest*. This in the beginning of the treatment may mean rest in a hospital, not because hospitalization is necessary for the treatment of ulcer, but it is at times the only way in which we can get some patients to realize the gravity of their illness and the consequent need to take it seriously. What is more important, it means rest in other directions. The patient must be taught to know that undue nervous tension is a bad thing for him. He must learn not to burn his candle of energy at both ends and in the middle. He must learn to relax before meals and not to rush off to strenuous work the moment the meal is over. Yet, this is precisely what the patient learns only with the greatest difficulty, since it runs contrary to his mental and nervous make-up.

You can now choose any one of a dozen procedures to control gastric hyperacidity and pylorospasm, *provided that you include proper dietetic management*. The chief reason that good results may be obtained from scores of methods of treating duodenal ulcer is that each method includes the same fundamental dietetic management.

Most generally employed in the treatment of ulcer is some form of *alkali therapy*. This certainly is not new, since for centuries people have been swallowing soda to relieve their indigestion. But the modern use of alkali therapy and its proper combination with diet therapy are largely due to the excellent work of Sippy. Sippy pointed out that protein in the diet is helpful in neutralizing excessive acid; that fat in the diet tends markedly to lessen acid secretion in the stomach; that these effects could be combined by administering milk and cream. He taught us that multiple small feedings are important, in that they tend to keep gastric acidity at a more constantly low level, and also do not give the stomach too much to do at any one time. With regard to the alkali, his first important contribution was that the dose of alkali is not any set amount, but enough alkali to control gastric acidity, to render the gastric contents neutral. If ulcer pain is not relieved on a given dose of alkali, then the dose of alkali should be increased. If pain persists, then the gastric contents should be examined late in the day and if free acid is still present, then still larger amounts of alkali must be given until there is no longer free acid. If pain still persists after gastric acid has been neutralized, then the pain is not due to uncomplicated ulcer. He further pointed out the need for the use of insoluble alkali salts, so that any alkali not required for acid neutralization was not absorbed but passed off in the stool, thereby avoiding alkalosis. He further pointed out the wisdom of employing magnesium oxide and calcium carbonate in separate powders, because of the tendency of the former to act as a laxative, and the latter in somewhat the opposite direction, so that by juggling the number of these powders taken daily, the patient himself could satisfactorily regulate the state of his bowels. One can modify the so-called Sippy treatment in many ways, provided that one does not lose sight of the above mentioned principles. As to the length of time that the alkali administration must be continued, this varies from case to case. It may be weeks, months or years, depending on the progress of the individual patient.

Of other ant-acid and demulcent substances, mucin has enjoyed considerable vogue. I have no personal experience with it, for it always seemed to me rather a nasty dose.

Of primary importance of course is the *diet*. At the beginning, while the gastric acidity is first being brought under control, it is best to feed only

milk and cream, as advised by Sippy. When symptoms are controlled, the diet may then be liberalized. This must be done gradually and with careful thought in the choice of the foods to be added. So, it is well to begin with cooked cereals, dry toast, stale bread; later, pureed vegetables, poached, soft boiled or scrambled eggs, simple desserts, soups, made without meat stock; still later, stewed meat, fowl, and fish. It is well to remember that meat should not be brought into the diet too soon, since it acts as a powerful stimulant to gastric secretion. The same is true of meat-stock soups, bouillon and alcohol. Alcohol, highly seasoned food, very hot food, and free use of salt should be permanently forbidden. Likewise, there should be a gradual transition from multiple to a smaller number of feedings. The ulcer patient would, however, be better off were he to adopt the European custom of a snack in the late morning, and afternoon tea. An allergic individual should of course avoid those foods to which he is found sensitive.

Valuable help is often given, especially early in the treatment, by *anti-spasmodic drugs*. Chief among these of course is belladonna.

In those patients, in whom periodic vomiting and X-ray findings point to considerable degree of retention, *gastric lavage* should be carried out every night before going to bed. This will give the stomach a chance to get some much needed rest, and will certainly speed up the healing of the inflammatory reaction.

*Ulcer patients after operation need medical treatment.* The experienced surgeon has long learned the wisdom of this measure, but the one who needs to be convinced of its value is the patient himself. The best time to do this is before the operation, not after. To be sure, the medical supervision and the instructions need not be quite as stringent as before operation.

Since focal infection may play a part in the etiology, then treatment should include the removal of such foci of infection.

I have said nothing of the use of non-specific shock treatment, parathormone injections, histamine treatment, or a score of other measures and treatments that may have been brought to your attention from time to time. Suffice it to say, that in experienced hands, they have not yet proved their worth.

Finally, remember to individualize in the treatment of ulcer patients. It is futile to regulate his diet and feed him medicines if you do not correct his bad habits and the harmful factors in his environment.

The *treatment of hemorrhage* deserves some special consideration. It will be recognized that the first indications are absolute bed rest and sedatives. The question has, however, been raised recently as to whether we should starve these patients for at least forty-eight hours or until bleeding has stopped, as has been customary in the past, or whether we should feed them. In the *Lancet*, 1935, Meulengracht reported his observations on 251 cases of massive bleeding from duodenal ulcer in which, from the beginning, he gave the patients frequent small feedings. The mortality in this group was 1.5 per cent as compared with 7.9 per cent in patients who were starved according to routine custom. Alvarez, in discussing this subject, has pointed out that the generally accepted view has been that the greatest danger which confronted the patient was the mechanical dislodgment of the clot in the ulcer crater by food, transcending in importance any effect the food might have in controlling gastric acidity.

The experience of Meulengracht, however, Alvarez felt, proved that digestion of the clot by unneutralized gastric juice was of much greater danger to the patient than the mechanical effect of food in stomach and duodenum, and that his own observations confirmed this view. Working along similar lines, Waldman of New York has recently used a continuous intragastric drip of aluminum hydroxide in water. In 21 cases so treated there has been no fatality. I, therefore, commend for your consideration the use of early feeding and, better still, intragastric continuous drip of aluminum hydroxide in bleeding ulcers.

What of *surgery in bleeding ulcer*? This would appear to depend largely on the age of the patient. In those under thirty-five, bleeding, even though severe, is rarely fatal, not even if there be a number of repetitions of such bleeding. Surgery is therefore indicated only in the exceptional case in this group. Between thirty-five and forty-five, bleeding is rarely serious in the first bout or even in the second, but beyond this may become more severe. Surgery should, therefore, be thought of after the second major hemorrhage. After the age of forty-five or fifty, however, bleeding becomes a much more serious affair. The first hemorrhage is usually weathered safely, but fully a third of the patients in this group may die in their second hemorrhage. Surgery should, therefore, be undertaken in this age group as soon as convenient in the interval after the first hemorrhage.

There is time only to remind you of the need of these bleeding patients for fluid and for blood, both of which however must be administered with caution, so that a rising blood pressure will not be responsible for renewed hemorrhage.

In conclusion, permit me to thank you for the privilege of addressing you, and especially for the delightful hospitality which I have experienced at your hands.

# Retroperitoneal Neoplasms

ERIC W. MACDONALD, M. D., Reserve Mines, N. S.

TWO cases of retroperitoneal tumors are here reported. The first case is evidently a primary carcinoma originating from a Wolffian rest. It is interesting on account of simulating, as it did, a strangulated inguinal hernia, for its rapid growth and its recurrence so soon after its removal. The second case, one of secondary epithelioma, is unusual in that the primary growth was so slow in metastasizing, and of its slow growth until it killed by exhausting the patient.

*Case 1., J. M. Age 55.*

I saw this man November 27th, 1935. He complained of a swelling in the right groin. Swelling was quite painful, nevertheless, he claimed there was no change since he first noticed it a week previously. He had been drinking for the past week. Examination revealed a large, tender, regular mass presenting at the external ring with tenderness and rigidity in the right lower iliac fossa. Diagnosis of strangulated inguinal hernia was made and operation performed the same evening.

*Operation:*—Usual inguinal incision was made. Caught in the external ring was a large hard firm mass, the mass was all extra peritoneal and was shelled out. It did not appear to invade the neighbouring structures. The cavity was packed with gauze and the abdominal wall reconstructed. The mass was hard, firm and encapsulated and measured about six by three inches, being drawn out at the lower pole to a knob which was caught in the ring. This man made an uneventful recovery and was discharged from the hospital December 16th, 1935.

*Dr. Smith's Report.* "The histological appearances have the characteristics of a malignant neoplasm of carcinomatous rather than sarcomatous type. The cells tend to lie in alveoli and in places have almost a papillary character. It is difficult to be sure of its origin but it may possibly be renal, that is, a true renal carcinoma, or even arising from a Wolffian rest."

This man remained in good condition until March 1936, when he noticed a painful swelling in the scar, especially when constipated. Examination at this time showed a hard irregular tumor mass fixing scar and skin to the deeper structures. X-ray did not reveal any bony involvement. On March 19th., while I was absent, another attempt was made at removal but this was found impossible due to the size and extension of the tumor mass into neighbouring structures. However, the greater part of the growth, including the testicle on the affected side, was removed and sent to Dr. Smith for examination who reported as follows:—

"The testicle itself shows no evidence of a primary tumor growth but the fat and sub-cutaneous tissue from the region of the previous operative scar are diffusely infiltrated. Although the appearances are not very characteristic, I regard the growth as a rapidly growing carcinoma arising from a Wolffian

rest. Owing to the activity of the tumor the cells and their arrangement have almost a sarcomatous character."

This man remained in hospital until June 1st. At this time the incision was healed but there was a hard blueish mass around it extending down the thigh. His leg and foot were greatly swollen. This mass rapidly increased in size as did also the swelling of the extremity, he became greatly emaciated and died in August.

There was never any clinical evidence that the mass had invaded the abdominal cavity.

*Case 2., Mrs. M. R. Age 31.*

She was first seen January 1932, when she gave a history of vaginal flowing, constant during the past month. She was the mother of seven children. Menses had been irregular for several months. Drugs were tried but had only temporary relief. Examination showed a very thin nervous woman. Knee jerks were very active otherwise nothing of importance was noticed, but vaginal examination showed the uterus slightly enlarged, the cervix hard and enlarged with bloody discharge from cavity of uterus. On February 2nd., the uterus was curetted and a piece of cervix removed. These were sent to the Pathologist for examination. He reported as follows:—

"The gross and histological appearance reveal an early squamous epithelioma; in addition some chorionic villi are seen in one of the sections".

The patient insisted on returning home but later was persuaded to return. On March 21st. a total hysterectomy was done. A week later she had a secondary haemorrhage and developed a dirty, foul discharge. This cleared up and she was discharged in good condition on April 17th. She put on weight, looked a different woman and claimed she had never felt so well. This continued until June 1936 when she began to complain of pain in her right foot, then in the hip posteriorly on the same side. Pain was worse at night. Massage, heat and linaments did not give relief. Pain appeared to radiate down the course of the sciatic nerve, which was tender on pressure. Pain was not constant but was present part of every day. Some days the patient was unable to walk on account of pain. She was treated in hospital by diathermy and dry heat, but this did not give any relief. On August 10th., blisters were applied along the course of the nerve. August 24th., half triple saline was injected into the sciatic nerve. On August 29th., sciatic nerve stretched manually. These treatments gave very little relief. Examination and X-ray of sacro-iliac joints and barium enema were all negative. She was discharged on October 24th., having been in hospital three months. She returned on November 16th. While home she complained of a continual pain on the inner side of left leg and lower side of abdomen. At this time there was a smooth mass, not especially tender, just palpable above Poupart's ligament. The vagina and rectum were not involved. Hospital notes state; mass has increased in size during the last week and the pain has shifted to the front of the leg and the patient walks with difficulty. On November 24th., had a general anaesthetic, and an incision was made over the mass parallel to Poupart's ligament and the mass explored extraperitoneally. The mass was firmly embedded in the deeper structures and impossible of removal; a soft area was opened into, which was filled with soft anaemic looking necrotic material. A section was removed and sent to Dr. Smith who reported as follows:—

"The histological appearance here reveal some dense fibrous tissue in which three small islets of epithelial tissue are seen, evidently a secondary

deposit from the squamous epitheloma of the cervix which was diagnosed in 1932. The cells are of adult character and do not show a very active growth tendency. In addition there is some simple chronic inflammatory change with repair of the fat tissue and haemorrhage in the vicinity."

From this time on until November 4th., 1937 when she died, she spent most of her time in hospital. The growth gradually increased, reaching enormous size and practically filled the whole lower abdomen. However, it caused no signs of obstruction and apparently did not invade the abdominal cavity. She had a wonderful appetite until the last few weeks but complained constantly of pain and ran the whole list of sedatives. Her leg and buttock became very oedematous while she became cadaverous.

\* \* \* \* \*

By retro-peritoneal tumors we mean those that arise from the tissues posterior to the peritoneum of the posterior abdominal wall. Among the tumors that are found in this locality are:—

*Lipomas* which are often firmly adherent to neighbouring structures. They do not consist of fat only, as myxomatous and even sarcomatous areas may be found. They generally recur after removal and are considered by many to be related to the teratomata. These tumors often reach an enormous size; the patient becoming very emaciated.

*Sarcoma.* This tumor arises from the fascia of the posterior abdominal wall. It occurs in middle life and is also firmly fixed in position. Areas of softening and cystic formation are common.

*Retroperitoneal and Mesenteric Lymphangioma* occurs in children and adults as a multilocular cavernous and cystic tumor originating along the spinal column.

*Retroperitoneal Lymphosarcoma* produces a large abdominal tumor composed of fused lymph nodes. These tumors may be associated with intestinal lesions so that it is difficult to determine the primary seat.

*Tumors of Extra renal Adrenal Rests.* In general these tumors are well encapsulated of large size, cystic or solid, of light yellow colour with a tendency towards necrosis and haemorrhage. They possess considerable malignancy and local extensions and general metastases are frequent.

*Lateral Retroperitoneal Tumors of Adrenal Rests.* The retroperitoneal tissues above and below the kidney and extending into the pelvis are the seat of a wide variety of tumors of sarcomatous and carcinomatous types. They include benign connective tissues growths, lipomas, fibroma, fibromyomas and ovarian cysts. Various types of sarcomas, rare carcinomas, teratomas and cysts also adrenal rests tumors.

*Retroperitoneal Dermoids and Teratoids.* Three varieties of epidermal tumors occur in retroperitoneal regions.

1. Tridermal teratomas.
2. Epidermal rests derived from the Wolffian duct are probably the source of certain dermoids of the kidney, broad ligaments, spermatic cord and epididymis. In this class falls the tumor found in my first case.
3. True dermoids are derived from imperfect closure of abdominal folds. Dermoid cysts of the pelvic connective tissues are rare. They appear chiefly

in women in the childbearing period, and are commonly situated behind the rectum and above the levator ani muscle.

1. Extension to the retroperitoneal tissues may occur from a carcinoma of the breast even when no pleural invasion occurs. In my second case extension to this region occurred from an epithelioma of the cervix with no clinical evidence of involvement of the peritoneum or metastases in the abdominal cavity.

2. In these notes liberal use has been made of Ewing's Neoplastic Disease and Boyd's Surgical Pathology.

My thanks are due Dr. Ralph Smith for his reports and interest shown in these cases.



# Pernicious or Addison's Anaemia

M. G. TOMPKINS, M.D., F.A.C.S., Dominion, N. S.

**P**ERNICIOUS Anaemia is a disease which is quite frequently overlooked, especially in its early stages. This is due largely to the fact that its symptoms may be found in many other diseases, and also that it appears during a time in life when it can so easily be confused with other conditions, as for instance, carcinoma of the stomach, as well as chronic myocardial disease. The only positive way of making a diagnosis is by means of the blood picture.

## Aetiology

The latest theory of the aetiology of this disease is due to the work of William Castle of Boston, carried on during the year 1929. He considers that pernicious anaemia is a deficiency disease. Normally, the stomach produces an anti-anaemic principle which is carried to the liver and stored there. This principle is formed from a combination of the following two factors:

1. An extrinsic factor present in protein food, such as meat.
2. An intrinsic factor present in the gastric mucosa, and of the nature of a rennin-like ferment.

The liver lets this anti-anaemic principle go to the bone marrow as there is a demand for blood.

When the stomach mucosa is damaged to such an extent that it cannot produce this intrinsic factor, and hence the liver is no longer able to store this anti-anaemic principle or to pass it along to the bone marrow which will, as the result of this stimulus, produce red blood cells, we have the condition known clinically as pernicious anaemia.

The disease is most common between the ages of 40 to 70, and is rare before 35. Males and females are affected, with approximately equal frequencies. Heredity is considered a factor. Faulty diet may in some instances be considered a factor, as for example, in China, where rice is the staple food, the disease is prevalent.

## Symptoms

The symptoms may be classified under three headings:

1. Those due to the anaemia itself.
2. Those associated with the gastro-intestinal tract.
3. Those due to involvement of the nervous system.

### 1. *Symptoms due to the anaemia itself.*

Under this heading the symptoms are mainly those due to anaemia in general, with the addition of a few symptoms which have special reference to pernicious anaemia itself.

The onset is insidious. Sooner or later a peculiar pallor of a lemon-yellow colour appears. This may not show itself until the disease is well marked. There may be marked dyspnoea on exertion. Palpitation with frequently

marked praecordial pain on exertion is fairly common. This may frequently be mistaken for angina when the patient is in the fifth or sixth decade of life. Weakness, sometimes going on to the stage of marked fatigue, is often outstanding. Vertigo, oedema of the ankles, rapid pulse, headache and haemic murmurs are fairly common.

### 2. *Symptoms associated with the gastro-intestinal tract.*

Soreness of the tongue may be an early and important symptom. Small ulcerated areas on the side of the tongue may be found. The whole surface of the organ may be smooth and red, and patients often complain bitterly of their glossitis. Anorexia, flatulence, nausea, vomiting, diarrhoea, alternating with constipation, may all be found in certain cases. With all this upset of the digestive tract there is very little loss of weight—an extremely important point in the differential diagnosis of the condition.

### 3. *Symptoms due to involvement of the nervous system.*

Several of the symptoms here listed have already been mentioned under the heading (1) above, such as headache and vertigo. Mild mental changes are encountered in some patients. Occasionally patients may complain of girdle sensations, lightning pains in the legs, and difficulty in walking, due to loss of sense of position. Vascular changes, such as nosebleeds, purpuric spots and ecchymosis may be encountered. Women occasionally state that they have menstrual disturbances, such as scanty flow or irregular menses.

In those cases where the nervous system is definitely involved there will be numbness and tingling of the hands and feet. In the case of the hands this symptom may be so marked that they have difficulty in feeding themselves. This numbness and tingling is regarded as a classical symptom of the disease.

When the posterior paths of the spinal cord is involved there is loss of two-point discrimination. When the lateral tracts are involved we may have any of the following conditions or combinations of them:

1. Disturbances of co-ordination.
2. Positive Babinski and Romberg's tests.
3. Ataxic or spastic gait.
4. Diminution or loss of sphincter control.

### Physical Findings

The nutrition appears good, as before mentioned, and there is little loss of weight. The hair may be partly grey. The skin frequently has a waxy, lemon-yellow pallor and occasionally shows areas of pigmentation or haemorrhages. The tongue is generally smooth, pale, reddish-brown or even red in color. There is occasionally ulceration of its margins. The heart rate may be increased, the heart frequently slightly enlarged, and haemic murmurs are often heard. The liver and spleen are rarely palpable. In advanced cases oedema of the ankles is common. There is usually an elevation of the temperature when the red blood cells are markedly lowered.

### Laboratory Findings

The blood is pale, watery, and of a yellowish-brown color. The red blood cells are reduced, and in advanced cases the count may be one million or even less. The haemoglobin is also reduced, but relatively less so than the red

blood count, so that the colour index is one or more. With regard to the white blood count, there is a leucopenia with a relative lymphocytosis. The icterus index is increased to 10 or even to 20, showing marked destruction of red cells which is in excess of their production. The coagulation and bleeding times are normal.

The blood film shows poikilocytosis, anisocytosis, megalocytes, microcytes, but the presence of macrocytes is a diagnostic point, since pernicious anaemia is a macrocytic anaemia.

### Diagnosis

In a middle-aged person with any combination of the following symptoms, pernicious anaemia should be suspected:

1. Weakness and fatigue of insidious onset.
2. Pallor of the skin, particularly of the lemon-yellow variety.
3. Numbness and tingling of the extremities.
4. Soreness of the tongue.

With these symptoms an investigation of the blood picture is imperative.

The treatment as given in the two following case reports will outline the treatment of pernicious anaemia in general. One of my objects in reporting these two cases is to show the physician how easily he may be misled by the symptoms.

**Case 1:** This patient was a man 68 years of age, who consulted me February 1st, 1937. His chief complaints were general weakness, some loss of appetite, and breathlessness on exertion. He also said that he was unable to walk more than 100 feet without taking a severe pain in the chest, and along with that he had a smothering sensation. The least exercise would cause the pulse rate to increase rapidly.

Physical examination showed no enlargement of the heart. A faint systolic murmur was heard in the mitral area. The blood pressure was 150 systolic and 90 diastolic. Although his colour was rather poor, I had no hesitation in telling him that the pain in his chest and the breathlessness was due to his heart. He was advised to return home and to take at least a month's rest in bed.

Several weeks later a report from him was to the effect that there was no improvement in his condition. He began to have tingling pains in the hands and feet, and to have difficulty in walking. This difficulty in walking took the nature of more or less of a loss of the sense of touch, in that he could not feel his feet coming in contact with the floor. Along with this, he had numbness in some of the fingers of each hand. This numbness appeared to follow fairly closely the distribution of the ulnar nerve. Due to the fact that he was living in the country, he was advised to enter the hospital for a check-up.

On admission his chief complaint was great weakness, and marked numbness in hands and feet. He now began to complain of a girdle sensation or tightening around the body. His colour was very waxy. He was admitted to hospital on March 6th. Besides these symptoms he complained a great deal of nausea and at times vomiting, but his appetite on the whole was fairly good. He was investigated with two possibilities in mind, namely, cancer of the stomach or pernicious anaemia. The gastric series showed no evidence of malignancy in the stomach. His blood count on admission showed a red count of 2,450,000, haemoglobin 76%, colour index 1.6, white cells, 6000, with

a differential count of polymorphs 43%, large mononuclears 5%, small mononuclears 47%, eosinophiles 5%. The erythrocytes showed slight acromia, marked anisocytosis and poikilocytosis, some microcytes, but with a preponderance of macrocytes, and also a rare normoblast. He was immediately put on cooked liver, as well as liver juices in various forms, and along with this he was also given Lederle's concentrated extract of liver, 1cc. daily for the first four days, and then 1 cc. every second day during the remaining time in hospital. The blood count on March 13th showed 2,320,000 red cells, 78% haemoglobin, colour index 1.6, 6,080 white cells, polymorphs 38%, large mononuclears 8%, small mononuclears 45%, basophiles 2%, eosinophiles 7%. Here it might be mentioned that it was rather puzzling to me why his red blood cells had decreased during these seven days.

A blood count taken on March 20th showed a red count of 3,520,000, haemoglobin of 78%, colour index 1.1, white cells 8000, polymorphs 50%, large mononuclears 9%, small mononuclears 31%, eosinophiles 8%, basophiles 2%. Along with the blood investigation, gastric analysis was undertaken, as an aid to diagnosis between pernicious anaemia and carcinoma of the stomach. It was found that there was no free hydrochloric acid in the stomach. Following histamine injection the hydrochloric acid was still negative.

On leaving hospital he was told to continue with Lederle's Liver Extract, 1cc. weekly, as well as liver orally, and in addition to take ventriculin for a month at a time and then follow with a month's rest. Later reports show this man to be in excellent physical condition, with a blood picture which is practically normal.

**Case 2:** This man, when seen by me in June, 1937, complained of stomach trouble, with frequent attacks of vomiting after eating, and general weakness. He was 67 years of age, and for the past five years had done very little work except some garden farming. His colour was good. From that time he was lost sight of until September 6th, 1937, when he came into the office, or rather, was half carried into the office, as he was so weak he was unable to walk. He presented a sorry picture. He was scarcely able to get his breath, was very waxy-yellow in colour, had marked oedema of the ankles as well as some of the face, and gave a history that for two weeks previous he was unable to keep anything on his stomach—even to liquids, which would come up almost at once. Here again I was almost certain of having a case of advanced carcinoma of the stomach, but I was struck with the lack of emaciation present. He apparently had lost practically no weight in the past six months. He was taken to hospital with a diagnosis resting between pernicious anaemia and carcinoma of the stomach.

The following day he was taken down to the X-ray Department for gastrointestinal series. His condition was so weakened that he required stimulants to withstand the ordeal. He was brought back to the ward and a blood count taken. This count—September 7th—showed a red count of 1,590,000, haemoglobin 30%, colour index 1, white count 6,200, polymorphs 70%, large mononuclears 2%, small mononuclears 28%. The erythrocytes showed very marked poikilocytosis, anisocytosis, macrocytes and a few microcytes, some achromia, but no nucleated red cells were found. He continued to vomit almost incessantly, and his condition was serious from the start. Useless to attempt liver by mouth, he was at once started on Lederle's Liver Extract, 1cc. daily intramuscularly, and along with this, blood transfusions. Blood transfusions

in pernicious anaemia are of value when given in small amounts frequently. His first transfusion was 300 cc., and although the blood appeared to match perfectly, he had a severe reaction, during which he broke out in a cold perspiration, became pulseless, pupils dilated, and I was afraid he was going out on the table. He rallied, however, following the giving of stimulants. After this, he developed a painful cellulitis, with marked ecchymosis of the whole upper arm. The only solution I can give for this condition was that some of the blood leaked out into the tissues. He was given four different blood transfusions of from 250 to 350 cc. every third day. Following the second transfusion he showed signs of improvement. The vomiting lessened, his colour became better, and the weakness was not so marked. On September 14th his blood showed 2,220,000 red cells, haemoglobin 45%, colour index 1, and white cells 7,500. On September 20th there were 2,680,000 red cells, haemoglobin 50% colour index 0.9, and white count 6,320, while on the 26th there were 3,250,000 red cells, haemoglobin 52%, colour index 0.8, and the white count was 5,840. On October 15th the red count was 4,050,000, haemoglobin 65%, colour index 1, and there was a white count of 6,200.

I am quite sure that without blood transfusions it would have been impossible to save this man.

My main object in presenting these two cases is to show that pernicious anaemia comes at an age in life when the diagnosis might easily be confused with other conditions.

# Left Versus Right

D. A. MACLEOD, M.D. Sydney.

IT is now quite commonplace, as one pursues their reading of current news, to observe the conflict in all countries of the two factors of government noted above. To the doctor the problem occasionally arises in connection with the peace, order and good government of that perplexing country "the acute abdomen". This dilemma having been the lot of the writer on three occasions, it might be of some interest to discuss briefly the rather disconcerting problem of Diverticulitis, especially in its acute manifestations.

Diverticula occur in any part of the gastro-intestinal tract but are more commonly found in the oesophagus, the duodenum, and in the colon, especially the descending portion. A few years ago it was my privilege to see Dr. Judd at the Mayo Clinic operating on a case which he diagnosed as stomach diverticulum, but many contend these are really oesophageal in origin.

The condition of diverticulosis is not uncommon, occurring, according to some, as often as in 5% of all persons at or beyond middle life. Of course only a small proportion of these become inflamed to produce the problem of diverticulitis which may be either acute or chronic. While remaining quiescent these ailmentary aneurisms produce no symptoms, but are quite prone to be acutely inflamed, especially that group found in the colon and then the problem arises of *right versus left* in the lower abdomen.

The causation of diverticula seems quite simple in that it is similar to aneurisms; namely, the protrusion of the lining membrane between the fibres of the supporting connective tissue tube, either due to increased internal pressure or due to congenital weakness. Probably both factors are concerned and in nearly all cases there is a definite history of constipation.

When one is called to a patient, over 40 years of age, sex of no great importance, complaining of lower abdominal pain, especially if midline or to the left, with a symptom complex of fever, rigidity, tenderness, vomiting, leucocytosis, normal urine, then acute diverticulitis or left sided appendicitis must be considered. As one reflects on the vagaries of referred pain in the abdomen, especially the ones of appendiceal origin, the problem of pre-operative differential diagnosis is difficult. In such a situation, good surgical judgment must decide if there is enough to warrant exploration and leave the niceties of diagnosis as to whether right or left to be settled by direct observation. Perhaps one may outline briefly the history and subsequent progress of a few cases to illustrate the point.

The patient was 50 years of age, with temperature of 100°, with low midline abdominal pain of which she had four previous attacks but none as severe as the present one. She had used laxatives for many years and noticed that during the previous attacks of pain laxatives made it worse. The bowels, during this attack, were more constipated than ever and it appeared that some acute inflammatory lesion was present in the abdomen. There had been some loss of weight and the question of malignancy, suddenly lessening the bowel lumen, was considered. The problem was accentuated by the fact that the patient was the wife of a professional colleague. Exploration seemed justified.

The appendix was normal but in the sigmoid was a large mass. In this case, as one frequently observes, the sigmoid can have many locations in the lower abdomen, especially when provided with a long "mesosigmoid". The problem of differentiating, at operation, between diverticulitis and malignancy is not easy. If time permits, of course a barium enema in capable hands will clear the diagnosis. Unfortunately when the services of a radiologist are not available one must rely on such surgical judgment as one may possess. In the case just referred to one did not feel capable of the resection under the circumstances and she was referred to Dr. Lahey. The acute condition of fever, pain, tenderness, vomiting and leucocytosis had by the time of transfer subsided and circumstances permitted barium enema examination with a subsequent diagnosis of acute diverticulitis. The use of bland diet and restricted laxatives has given the patient comfort for the past eight years.

A male, aged 50, was taken ill suddenly at midnight with abdominal pain and vomiting. There was a history of having been quite well for months past. Pain was slightly to the right of the midline with temperature 100°, some guarding, leucocytosis 20,000, urine normal, bowels fair, no laxative habit. The site of tenderness was suggestive of diverticulitis but in the absence of the laxative history and recent freedom of pain, the condition was not definitely diagnosed. Exploration was advisable with diagnosis (1) appendicitis (2) diverticulitis. Quite an inflammatory reaction originating in an acute diverticulitis of the sigmoid was found. No resection was done and the condition subsided. The convalescence was stormy, owing to acute dilatation of the stomach, lasting one week and followed by surgical mumps, requiring incision and drainage. This patient subsequently gave a corrected history of intermittent pain, worse when using laxatives, the attacks having occurred five years ago and lasting for three weeks.

A male, 72 years of age, living 30 miles in the country was seen with acute abdominal pain, severe, colicky, over the whole abdomen. There was a history of an attack somewhat similar, five years before, from which he recovered. He had always been very constipated and used many laxatives. There was some distension, fever and vomiting. Repeated enemas only brought blood. A barium enema was attempted but could not be retained. Diagnosis—*first* probably malignant stricture with obstruction; *second*, diverticulitis. Operation revealed many diverticula along the transverse colon; many of them acutely inflamed. The patient is making slow progress to recovery.

When one has opened the abdomen and such a condition is found the problem is what further operative interference if any should be carried out. One hesitates to express an opinion on such a limited experience which consists of two other cases in addition to the foregoing; but it would appear that resection will be attended with greater mortality than less heroic measures. All these cases have done well on bland diet, oil enemas, and rest. The recent edition of Maingot's Post Graduate Surgery suggests resection and possibly the defective area may be removed by such an operation but in view of an infected field, the serious mortality does suggest to an ordinary practitioner the policy of medical, rather than surgical, treatment. The complication of perforation will of course require adequate operative procedure but it has been my good fortune to avoid that condition so far.

The foregoing reports are submitted in the full realization of their scientific deficiencies. Rather is the hope entertained that your readers may have knowledge of the problems of an average practitioner in the famed clinics of Cape Breton over.

# Tuberculosis Day by Day

J. J. MACRITCHIE, M.D., D.M.H.O.

VOLUMES have been written and a countless number of words have been spoken on the subject of tuberculosis in all its forms, and in this short paper I do not pretend to enlighten you any as you are physicians with many years of clinical experience behind you, and have first hand knowledge of the disease and its problems.

I do not think that in recent years any other disease has occupied the same public attention or has called for a greater financial outlay in attempting to eradicate it, than tuberculosis. The cost has been enormous, both to the individual and the state, and in this respect is in the same category as mental diseases. Tuberculosis is not in any way comparable to other diseases of its particular group, that is, the communicable disease group, as it necessitates a great demand on time and money; hence it looms as a far greater problem.

Out of the welter of information produced in the past, and in the light of present day knowledge, no specific remedy has been given to the world, and this indeed may seem strange when the particular germ is known, and has been isolated. Theories have been propounded and exploded; treatment and cures by the score have been advised and prescribed, but out of them all, as yet, we know of nothing more effective than rest for treatment, and isolation for prevention and control. Modern surgery has proved to be of valuable assistance but by no means has solved the problem. Now I might say here that prevention and control is what concerns Public Health bodies, treatment being another phase of the question. Probably the greatest development in recent years has been the awakening of a public conscience, and a great desire to learn more about disease, its effect on the human system, and methods and means of prevention. Associated with this is a greater grasp of sanitation, with the growing tendency on the part of man to make and keep himself clean, as much for his neighbor's sake as for his own. Preventive medicine teaches the individual to safeguard his body against infection. It is the medicine of and for the future, and in it we see the hope of eliminating the toll taking diseases to a great extent. In considering tuberculosis, it would be well to look and see what has been accomplished in the past, and a survey of that should be an incentive to spur our efforts in the future. There has been a marked decline in the mortality rate during the past several decades, in Nova Scotia as well as in other parts of the world. The question is often asked *why?* Replies quoted attribute such a decline to natural laws, better treatment and isolation, better housing, more nourishing food, improved economic conditions, lower birth rates and a decrease in immigration. These undoubtedly are factors, and to point to any one of these as more responsible than the others, would be hazarding a guess. We should not attempt to mislead the public by stating that Public Health bodies are alone responsible, but it would be a fair statement to make that the effort of Public Health bodies in cooperation with those of an interested public *are* to a great degree responsible.



I would like to point out to you that there was some decline in the tuberculosis mortality rate before there was any organized campaign against the disease, but that does not detract from the work of Public Health in the past. The work has been gratifying to the highest degree, and has given a better understanding of tuberculosis than we otherwise would have had. Public Health work, with a full support of the people and governing bodies, will demonstrate its value in a most striking and convincing manner. Let us go back again to the decline in the death rate in Nova Scotia. Satisfactory as has been the lowering rate, we must not lose sight of the fact that the problem is still a serious one requiring the earnest attention and action of all those concerned, individuals and organizations. Tuberculosis is a communicable disease, capable of being transmitted from one human being to another and, as such, creates a problem requiring the application of all means available to prevent its spread; and this can be done only by isolation, the underlying principle of prevention and control. As Public Health bodies, we are concerned mainly with prevention and control, or paying attention primarily to the open case, with bacilli in the sputum. The control of such cases is the all important matter, and the necessary disposal is a daily source of worry to the doctors, health officers, and the Department of Health. Isolation at home or in an institution is imperative, preferably the latter when the infected person has a number of young contacts; but as you know, this cannot always be done, due to the poor financial state of the person or the town or municipality in which he lives. Most or many of cases known are of the indigent class, and have to be referred to a voluntary organization or municipality for assistance. The economic side of the question has primary consideration when institutionalizing is necessary, and the first question asked is, Who is going to pay? That is quite a natural question to ask as there is nothing free under the sun and certainly the treatment of the tuberculous poor is not, not even in Saskatchewan. True, there, it is free to the individual, but not to the state. True it is, also here, that it is free to the individual in 50% of our cases, but not to the state. Furthermore, we have the machinery right here in this province to furnish isolation and treatment for every case of open tuberculosis, and that, by one stroke of the pen, by those in whom the power is vested, namely, the wardens, clerks, mayors and health officers of the various towns and municipalities. They could have, if they so wish, control of the tuberculous situation in carrying out the statutory regulations of the province. However, I can readily see the difficulties confronting these mentioned officials. Existing financial conditions prevent them from exercising their authority but let us hope that, with improving conditions, they will, without any hesitation, use it to the limit. But however, I think some municipalities could do better than they have done or are doing, and I would suggest that sometimes the Health officer could quickly force matters by making these municipalities and towns aware of the fact that he could cause to have a patient institutionalized, if they are reluctant about doing so.

Summing up, the act is clear, and there is really no reason why any open case urgently in need of treatment and isolation should not receive the benefits of the facilities offered by this province. All governing bodies are custodians of the public money and as I have repeatedly said, their first consideration and appropriations should be for Public Health.

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It is to be distinctly understood that the Editors of this Journal do not necessarily subscribe to the views of its contributors, except those which may be expressed in this section.

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**I**N the dim and distant past the ordinary individual either walked, rode on horseback or drove in a carriage. He was as safe on the streets as he was in his own home but, with the advent of bicycles and, especially, the motor car, the speed developed has made it exceedingly dangerous to travel on the highway day or night.

Recently the number of accidents and deaths resulting from careless drivers or pedestrians is appalling, and has reached such a stage that the authorities have been compelled to lay down strict rules and regulations for travel on our highways. During the past few years thousands of men, women and children have lost their lives on city streets and roads throughout the country, and many have met with accidents which have caused not only pain and suffering, but many have been maimed for life. Now, how has this come about—and what are the remedies?

We are living in an age where speed appears, to many, to be necessary to carry on the day's work. Competition is so keen there is a feeling that everyone must hurry to meet this competition. Then, there is the pleasure of fast driving which the younger generation feel they must have, notwithstanding the risk they run of destroying not only their own lives, but the lives of many who travel daily on foot or in cars. A few years ago, if we travelled at the rate of six or eight miles an hour we felt we were making great progress. Today, thirty or forty or even sixty miles an hour is no uncommon performance. Speed is a great danger, even when the rules and regulations are strictly complied with. Our paved roads, on which millions of dollars have been expended, make it a great temptation to travel beyond the speed limit. But, it must be pointed out, that even a greater danger than speed alone is the driver who has indulged in alcohol, before or during his trip. This is not intended as an article on temperance but rather a voicing of the whole question from a medical point of view.

Anyone having any experience in our police, coroner, or superior courts, must have noticed the number of drivers causing accidents, or death and, in many instances, it has been found beyond any doubt that alcohol, directly or indirectly (even in small quantities), has caused the whole trouble. It is not necessary to be a drunken driver to cause accidents, but one under the influence of even a small quantity is very often the source of great danger to the

individual and to the travelling public. The advice—"If you are going to drive a car don't drink—or if you drink, don't drive a car" is wise advice.

When statistics show that forty thousand people were killed by automobiles on the North American Continent, and ten million injured temporarily, we see what a menace the motor car becomes, driven by careless or intoxicated drivers. When a car is driven at a speed of sixty miles an hour, that car is travelling 88 ft. a second. A person reacts in about  $1/5$  second to what he sees or hears. This is known as reaction time. When the mind is controlled by alcohol this time may be slowed to  $2/5$  seconds or even more. If you have  $1/5$  second indeciding what to do, you have travelled 18 ft., or 36 ft. in  $2/5$  seconds. Either of these differences may mean the difference between life and death.

Investigation by reliable investigators has shown that even one ounce of whiskey produces loss of efficiency. In mechanical work, even if the work is done more rapidly, it is frequently done at the expense of accuracy. The first effect of alcohol is upon the higher functions of the brain. Very frequently the person concerned often thinks he is doing better than normally.

In 1935 the British Medical Association was asked by the Transport Department of the British Government to make a report on the "Relation of Alcohol to Road Accidents". This Commission was comprised of some of our leading medical men in Great Britain.

The following is the Summary and Conclusions of the Commission:—

Alcohol in an amount less than is customarily regarded as sufficient to render a person "under the influence of alcohol to such an extent as to be incapable of having proper control of the vehicle" has definite effects on the human body.

The effect of alcohol in a quantity corresponding to three ounces of whiskey has been shown by psychological tests to diminish attention and control, to reduce capacity to learn, and to effect reasoning powers adversely. The subjects of such tests frequently believe—quite erroneously—that they have performed their tests more efficiently as a result of taking these amounts of alcohol.

It has been shown by investigation that the consumption of amounts corresponding to two to three ounces of whisky usually affects adversely the power of making movements dependent on rapid and accurate co-ordination. The ability of the eyes to follow clearly an object brought nearer and nearer to them, the speed and accuracy of hand movements, the hand and eye co-operation involved in typewriting, and the co-ordination of leg movements in walking and climbing have been the subjects of investigation. In such cases it has been shown that small amounts of alcohol usually diminish the rapidity and accuracy of neuro-muscular co-ordination.

The elimination of alcohol from the body is a slow process; the body oxidizes alcohol at the rate of about 10 to 12 c.cm. per hour, or the equivalent of one ounce of whisky per hour and this rate is not increased when the concentration of alcohol in the blood is raised by the drinking of larger quantities of alcoholic liquor.

As alcohol in no greater quantity than that contained in three ounces of whisky has been found to affect appreciably the mental processes and neuro-muscular co-ordination of individuals, it must frequently affect the driving capacity of the driver who takes alcoholic liquor, even in such small amounts. After taking alcohol he may believe himself to be driving better, but, in fact, his body works less efficiently. This adverse effect generally occurs even if alcohol is taken in moderate quantities some hours before driving, and especially if taken in the absence of food.

In view of this the foregoing advice is good and wise advice, and should be followed by all drivers of cars: **"If You Are Going To Drive A Car, Don't Drink—Or If You Drink, Don't Drive A Car."**

J. K. McL.

DR. J. J. Cameron's letter accompanied by a request that it appear in the December issue arrived the day of the meeting of the Editorial Board to finally decide on that number's contents. Although arriving at the last minute we felt that a request from so old and highly esteemed a member should not go unheeded, so accordingly other material was held over until the present issue. We all enjoy a contribution from Dr. Cameron's pen, vigorous, straight-forward and suggestive, and we hope that he will be spared for many years and that it will be said of him as of one of old "his eye was not dim, nor his natural force abated".

You will note that Dr. Cameron is attempting to think his way through to a practical application of preventive principles to the elimination of venereal disease. To aid him I would refer him to the June, 1936 number of the BULLETIN to an article entitled "Prevention of Venereal Disease in Sweden" taken from the American Journal of Public Health of April, 1936, and to the suggestions contained in my own article as recently as October.

Coming to those portions of Dr. Cameron's letter bearing on morals and religion and my "pagan" trimmings, his observations were so delightful and naive that I went to the trouble of preparing a short paper explaining and clarifying the points which appeared to worry our good colleague, as it was far from me to ignore such honest comment. It is not being published, however, because I sensed a feeling that such would be of little interest to our colleagues as a whole, and that they would prefer the matter to be closed and I am inclined to agree that there would probably be little to be gained and possibly a good deal to be lost by further discussion.

H. W. S.

## CASE REPORTS

### Thrombosis Of Mesenteric Vessels With Necrosis of Bowel.

Female, age 27, married.

#### *Previous History:*

Appendectomy in June, 1930. Appendix found congested and bound down with adhesions.

One child born in January, 1930.

Treated in hospital in 1933 for profuse vaginal discharge, which was considered Neisserian in origin, but was not proven.

#### *Present Illness:*

The patient gives a history that she was feeling quite well up to the time of the onset of this illness.

At 3 a.m. on the day of her admission to hospital, she was suddenly awakened from sound sleep by a severe pain in her abdomen. This pain was so severe that within a very short time she fainted. The pain continued and gradually increased in intensity. Within a short time she vomited a large quantity of dark greenish coloured fluid.

When seen by me two hours later she was still suffering intense pain, and was vomiting at intervals. I was, however, struck with the absence of any marked degree of shock. She was given a hypodermic of morphine which gave her very temporary relief only. I saw her a few hours later again, and with no improvement in her condition she was immediately transferred to hospital for investigation.

Upon her admission to hospital, I consulted with Dr. Tompkins, and I give the result of his examination below. Her temperature at this time was 98, pulse 70, and respirations 20. The white blood count was 12,000, with 88% polymorphs.

#### *Examination:*

One saw a healthy looking young woman, with very little evidence of shock, who appeared to be lying comfortably in bed.

The heart and lungs were negative.

The abdomen showed a right rectus scar, the site of her previous appendectomy. The lower abdomen, below the level of the umbilicus, appeared somewhat full on inspection. On percussion, one was able to make out the presence of free fluid in the abdomen.

On palpation there was some tenderness and considerable rigidity on whole left side of the abdomen. This tenderness and rigidity became much more marked as one palpated across the midline to the right. At about the level of the umbilicus on the right side the rigidity became very marked, and, as one palpated upwards towards the liver one was struck by the intense rigidity. The point of greatest resistance was midway between the umbilicus and the lower border of the ribs and well out in the loin. The least pressure at this point would cause the patient excruciating pain. For this reason it was im-

possible to palpate a mass if present. Pressure directly over the gall bladder did not cause any severe pain, and for this reason it was ruled out as the seat of the trouble.

It was thought that on account of the suspected previous Neisserian infection that we were dealing with a case of intestinal obstruction due to some intestinal bands. An S. S. enema was given with no result whatever. We decided upon immediate laparotomy.

#### *Operation:*

Right rectus incision, cutting out old scar. On opening into abdomen clear fluid exuded at once, under great pressure. This was soon followed by bright red serous fluid, in great quantities. Quite a number of omental adhesions were found present along the edges of the peritoneum. These were at once freed. On passing hand into abdomen and down into pelvis, it was found that the pelvis was filled with this serous fluid. We at once thought of the possibility of an ectopic. Uterus found in good position—tubes and ovaries normal. Passing hand upwards we located a mass in right upper quadrant below liver. Thought at first it was possibly a large inflamed gall bladder. On enlarging incision and again passing hand upwards we located a large, broad band, attached to the posterior abdominal wall. Unable to locate the attachment at the other end. Great difficulty was found in getting this band up. Considerable traction used, and unfortunately this band broke. We then started to deliver this mass, and we found a loop bowel, some 30" in length—the middle third completely necrosed and greatly engorged with blood. The proximal and distal ends of this loop were greatly congested, very dark red, with mottled areas throughout. The mesentery connected with this damaged area showed all blood vessels thrombosed. The thrombosed vessels could be seen quite clearly with the eye, and readily palpable. The line of demarcation between the damaged bowel and the healthy bowel was very distinct. It was decided to remove this whole loop. Bowel resected back beyond the line of demarcation. Ends of bowel invaginated, and a side to side anastomosis done. Two cigarette drains inserted, and abdomen closed.

As to the cause of this thrombosis, I would be inclined to think that this large band which was found in some way caused pressure on the blood vessels, and interfered with the proper circulation.

She was returned to the room in fairly good condition and at once given continuous intravenous of saline for the next twelve hours. Following this she was given 1000 cc. of 10% glucose solution, with 15 mm. of insulin—this again repeated in the evening, and again on the following morning. Morphine given in full doses for relief of pain. Enema given the fourth day with good result. Her temperature following operation, reached 100—her pulse for two days following varied between 90 and 100.

One week following operation, temperature, pulse and respirations were normal, bowels regular. There was never any distension, and the patient is quite comfortable.

C. T. SPARROW,  
Reserve Mines.

### Adenocarcinoma of the Kidney

A clerk, married, thirty-two years old, weight two hundred and twenty-five pounds, was seen by me in March, 1930. He went to bed complaining of pain in the left hypochondrium. His family, and previous history, and habits were good. He told me that three years previously he was end man on a tug of war team at a garden party. The opposing team was too strong and he was dragged some distance with the result that he felt some pain in the above region for some time after. But as it soon got well, he did not mention it to anyone. I examined him and on deep palpation located a mass in the left loin.

Examination of the urine was negative. He was kept at rest, and given sedatives, and was well again in a few days and back to work. However, a few weeks later pain returned in the same region, and I decided the hospital was the best place for him. This was twelve miles away. There he was examined by a surgeon, who agreed, for the time being, that the mass felt was kidney. He asked the interne to examine the urine and again it was negative. A doubt then existed. Several doctors and two internes examined him and said definitely it was an enlarged spleen, and not kidney. He was given treatment and three weeks after returned home feeling much better. A short time later the old pain returned.

For some two years the Sun Life had been sending two medical men to Newfoundland to give clinics at the medical convention. On this particular occasion two outstanding men were sent; one a professor in medicine and the other a specialist in urology. The medical man examined my patient very carefully and said emphatically he had an enlarged spleen, and gave those present quite a lecture on splenic diseases. Despite this, the urologist then examined the patient, and gave as his opinion, with reasons, that it was an enlarged kidney, and not an enlarged spleen.

The following morning a cystoscopic examination was done, and the usual routine treatment previous to X-ray; and the presence of an enlarged kidney was confirmed. An operation was advised but for some reason was postponed. The patient returned home and in a few months this tumor filled out his left side so that it was noticeable under his buttoned coat. At this time he went again to the same hospital and was told it was too large for successful removal. I then sent him to a large hospital in Canada. After several examinations it was decided to operate. But after being three hours on operating table, after opening the peritoneal cavity, the mass was found attached to the inferior vena cava. The wound was closed without completely removing the mass. He made a stormy recovery with an incision extending from the ninth rib to the pubis, and from this opening a thick tarry substance drained, which had a very offensive odour. His wound was dressed several times a day. His weight at this time was one hundred and fifty pounds. Later he was taken to the veranda and with fresh air, good food, and medicine, he soon picked up. About this time I received the pathological report from the hospital; the diagnosis was adenocarcinoma of kidney. This man got well enough to return to work and put on his former weight. He was free from symptoms for about two years. Suddenly his old symptoms returned and he died in a month.

I think those who examined this man were influenced by the fact that the urine was negative during his illness. An enlarged left kidney may be mistaken for the spleen. The points of distinction are, that the spleen has a sharp edge; the edge of the kidney is rounded. The existence of a sharp edge in an ab-

dominal tumor excludes the kidney at once. There is no space between the posterior border of the kidney and the erector spinal as there is in the case of the spleen. The colon lies between the kidney and the abdominal wall, but not over the spleen. It is impossible to determine the size of the kidney by percussion. An enlarged kidney tends to bulge forward: peri-nephritic abscesses, bulge backwards.

H. GIOVANNETTI, Sydney.

### Two Interesting Mastoid Cases

#### 1.

Mr. J. R. T. age 55. Carpenter.

*Personal and Family history* negative.

*Past History.* Has had a chronic bronchitis since the army days.

*Present Illness.* Patient first seen by me September 11th. Some eight weeks ago patient had an acute exacerbation of his chronic bronchitis; since that time he has been suffering pain about the right ear and side of head, gradually increasing in severity, requiring over 50 Frossts' 222 tablets the past 10 days. There has been some difficulty in mastication. No history of injury. No vomiting or dizziness. Never had *any ear discharge*. About two days before consulting me the patient noticed a slight puffiness over the temporal region.

*Local Examination.* Definite puffiness over zygomatic area. No swelling over mastoid or tip. Acutely tender over the anterior portion of the auricle and over the temporo-mandibular joint. Ear canal examination revealed no discharge; the drum was definitely red, but no bulging or any discharge visible.

On September 14th lateral X-rays of mastoids were taken—showing very definite involvement, degeneration and absorption on the right side. The left side showed normal large zygomatic cells in contrast to the extensive involvements of the zygomatic cells on the right side. The patient refused operation at this time but returned for same five days later at which time the swelling over the temporal region was more extensive.

At operation a large amount of pus was found upon removal of the cortex; the entire mastoid was broken down. The zygomatic cells extended quite forward and were cleaned out as thoroughly as possible. There was no exposure of the dura.

The patient was afebrile on the second day and made an uneventful recovery; leaving the hospital in ten days.

Quoting Coates, "In a limited number of cases the membrana tympani presents few, if any, inflammatory changes and may not even have been perforated. Such patients state they have suffered from earache in the beginning, but have not at any time noticed a discharge. Some pain and difficulty are experienced upon mastication. This particular type of mastoid occurs when the zygomatic cells are large and most frequently found in children. By the inexperienced eye its significance is often overlooked, as the condition is not obviously connected with the mastoid process, which may be little, if any, swollen."

#### Interesting Points of Case:

1. Zygomatic mastoiditis in adult.
2. No ear discharge at any time.



## 2.

Male. A. F. Age 10.

*A case of double Bezold's Mastoiditis.*

This is a case of double mastoiditis following severe scarlet fever. The patient was extremely ill and very toxic. Bilateral ear discharge 3-4 weeks. When the patient was last seen before being admitted to hospital, the neck, on both sides below the mastoid tips was swollen and extremely tender on pressure. On account of the oedema the finger could not be placed underneath the apex of the mastoid. The discharge was profuse, but not very thick.

A bilateral mastoidectomy was done. The cortex was thick and the cells were of the diploic type. Thick pus was encountered at the tips; the latter were broken through and pressure on the neck caused pus to escape upwards.

The patient had quite a stormy convalescence for the first week but gradually made an uneventful recovery.

*Note:* Bezold's mastoiditis is favored where there are large pneumatic cells at the apex and where the cortex is dense and fairly thick.

J. LAND,  
Glace Bay.

### Deep Seated Lobar Pneumonia and Pericarditis With Effusion

L. McE., age 28, occupation miner.

*Complaints:* (1) Severe pain in left side of chest,  
(2) Shortness of breath,  
(3) Coughing blood-stained sputum.

*Family History:* Father died of cancer of the bowel, otherwise nothing of note.

*Personal History:* Unimportant.

*Present Illness:* On August 29, 1937, two weeks before he was seen by his physician, this patient was involved in an automobile accident in which he suffered a moderately severe wrenching of his abdominal muscles, particularly on the right side, and which became painful and tender to touch. Two days before he consulted me the pain shifted to the left side of his chest. I saw him at night, and he complained of severe pain over his heart, especially on deep breathing or coughing. He brought up considerable amounts of blood-stained sputum, and stated that severe paroxysms of coughing had been going on since the day previous. He could hardly get his breath after a spell of coughing. A hypodermic of morphine was administered, and the next morning, still complaining of severe pain, he was sent to hospital.

*Examination:* On the night of September 12, when seen at his home, this patient was obviously in considerable distress. He had a cyanotic pallor of the face with bluish lips, and his whole body was covered by a profuse cold clammy perspiration. His extreme praecordial pain together with his severe dyspnoea made him restless. There was very little abdominal tenderness at the site of his two weeks' old injury. The temperature was not elevated, but his pulse was running at 120 beats per minute, regular, of fairly good quality,

and the respirations were 44 per minute. At frequent intervals he coughed up thick tenacious muco-purulent sputum, often containing small amounts of red blood.

His chest muscles were heaving, perhaps more so on the right side.

The percussion note showed very slight impairment toward the base of the left lung.

Loud bronchial breath sounds were heard over the lower lobe of the left lung, and harsh broncho-vesicular breath sounds were present throughout nearly the whole of the remainder of the lung. No rales or pleural friction rubs were auscultated.

Upon examining the heart, the apex beat was not visible or palpable. No thrills were palpable.

There was no evidence of any increased area of cardiac dulness.

The heart sounds, however, were somewhat weaker in intensity than one would expect in an individual who was not thick-chested by any means. No murmurs were heard, and no pericardial friction rub elicited.

The next day when admitted to hospital his temperature was 101 degrees, the pulse 110, and the respirations 40. The blood pressure was systolic 108, diastolic 70, and the urinalysis was negative. He still appeared to be suffering somewhat from the effects of shock, and still complained of severe praecordial pain which was made worse at each breath. Blood-stained sputum was frequently expectorated, and on many occasions this patient coughed up about a teaspoonful of almost pure blood, rather bright colored, and having the appearance of arterial blood. The heart and lung examinations were essentially the same as when he was seen the night before.

A provisional diagnosis of a deep-seated pneumonic process with an associated pericarditis was made.

#### *Treatment and Progress of the Case:*

He was put on the usual pneumonia regime, with fresh air, Fowler's position, and so forth. Hot poultices were applied to the praecordium and sedatives for pain administered, occasionally morphine being resorted to. The following day his temperature was as high as 102.4, but the pulse rate and respirations did not increase. In fact the pulse rate at this time was only in the seventies. The white blood count was 22,000. There was definite evidence of an increased area of cardiac dulness at this time, and the left border of the heart could be percussed well outside of the mid-clavicular line in the fifth interspace. He still perspired profusely. An expectorant mixture which contained small amounts of tinctures of digitalis and nuxvomica was given for a few days.

His condition was quite grave for two days. At the end of that time the temperature, pulse and respirations dropped, approaching normal, although the respiratory rate tended to remain above the normal line by a few points for a few days. The day of the crisis was the only time that rales were ever heard at the base of the left lung, and then only a few rather fine ones were heard, and these appeared to be far away from the diaphragm of the stethoscope. Following the crisis his pulse rate ran as a rule between seventy to eighty, but was of fair intensity only, which would bear out the opinion that there was probably some fluid in the pericardial sac. The patient's distress became less and the profuse perspiration cleared up, but he complained for days of praecordial pain, again made worse upon inspiration, and requiring persistent administration of analgesics.

Cough with mucoid blood-stained sputum and praecordial pain persisted almost up to the time of his discharge from hospital five weeks later on October 18, but the sputum became less profuse and pain less pronounced after two weeks of hospitalization. Repeated examinations of the sputum were reported negative for tuberculosis.

On September 17 it was felt that he had improved sufficiently to allow a portable X-ray of his chest to be taken. This showed a distinct haze at the base of the left lung, and the heart shadow appeared enlarged and showed a haziness at its periphery. The röntgenologist was of the opinion that there was a pneumonic process at the base of the left lung, probably deep seated, and a pericarditis with effusion also present.

From September 27 the temperature, pulse and respirations tended to remain practically normal with only slight fluctuations. The harsh breath sounds slowly cleared up and after three weeks in hospital very little of note could be heard in the lungs. The heart sounds were slightly stronger and the area of cardiac dulness somewhat lessened on his discharge from hospital.

*Comment:* The incident of the automobile accident was probably in no way directly concerned with the illness, except perhaps to lower the natural resistance of the patient's body, and make it more susceptible to infection and disease in general.

The persistence of blood-stained sputum for weeks with lack of outstanding physical findings in the chest would seem to make this case rather more interesting than the average case of pneumonia. Did the pericarditis with its probable resulting displacement of lung tissue in an already diseased left lung have anything to do with the persistency of coughing blood?

No pleural friction rub was ever heard, yet severe pain on inspiration was a daily complaint. Could this be caused by a diseased lung—when attempting to expand at inspiration—pressing against an already inflamed pericardium, thus causing pain on inspiration which is not pleural in origin at all?

It would seem reasonable that the pericarditis was possibly pneumococcal in origin, and that the covering membrane of the heart was affected within a short time following the commencing development of lung pathology.

H. L. KNODELL,  
Dominion, N. S.

### Chronic Brain Abscess of the Right Temporal Lobe.

H. E. H. TAYLOR, Port Morien, N. S.

This is the case of a young schoolboy, age ten years, whose history dates from 1932. At that time Dr. W. W. Patton reported the case, after an apparent recovery, as an "Encephalitis, Symptomatic of Brain Abscess". (See Med. Bull. Vol. XIII No. 2). A brief resume of the case at that time is as follows:

One month following a common cold, complicated with a suppurative otitis media on the right side, the patient suffered from severe frontal headaches with marked irritability aggravated by examination. He was admitted to hospital where a spinal tap showed the fluid to be under extreme pressure: examination showed a cell count of 13: it was otherwise normal. A spastic weakness of his left arm and leg developed. At the end of two months his

condition improved sufficiently to allow his discharge, although headaches and irritability still remained. Two months later he developed a series of convulsive seizures of a Jacksonian type affecting the left side; these were climaxed in another month's time by a semi-comatose condition during which his left arm and leg were spastic. The prognosis at this time appeared hopeless but after a stormy course he gradually improved. For the next four years he appeared perfectly healthy except for a very slight left sided limp and a peculiar change in temperament. Mentally he was bright and did well in school.

In Feb. 1937 I first saw him, complaining of a headache and a weakness of left arm and leg. Examination showed the following C. N. symptoms—a marked irritability, a dilated right pupil and increased patellar reflexes. He recovered from this attack in two days following which the leg weakness was much more marked and a tremor commenced in the left arm. Both these became gradually worse, the tremor becoming so marked that he could not hold a glass of water without spilling it. He was, however, able to continue at school and his general condition was healthy.

In June 1937 he suffered a similar attack but this ended with spastic convulsions. These were controlled with morphine and on the following day he appeared better. From this time he had a marked spastic gait with loss of co-ordination of his left leg, a very marked intention tremor with weakness of the left arm and a nystagmus. He walked with his left foot inverted and never knew where this leg would go, with the result that, in trying to keep up with the other boys, he frequently stumbled and fell.

*Present Illness, Nov. 19, 1937.*

Complaints: Extreme weakness of left leg.

Headache.

Irritability.

On returning home from school, patient's leg gave out so that he could not stand. He commenced to have severe frontal headaches with some photophobia. On questioning him he became very irritable and resented any interference. Was placed in bed and on the following day lapsed into a semi-comatose condition from which he could be aroused by calling his name or shaking him. Headache continued. The next day his coma increased so that he could only be aroused with difficulty. On attempting any examination he became spastic, especially his left leg and arm. Removed to hospital for extra-oral feeding.

*Physical Examination.*

Young boy well developed and nourished, breathing stertorously and in semi-comatose condition. He becomes very irritable on examination.

*Head and Neck:* Right pupil dilated. Both react normally. Optic discs appear clear cut and normal. No neck rigidity present.

*Chest:* Exceptionally well developed for his age. No abnormal breath sounds.

*Heart:* Rate 90, Rhythm normal, sounds forceful. No murmurs.

*Abdomen:* Negative for masses or enlarged organs.

## C. N. S.:

*Cranial nerves:* Generalized weakness of right side.

*Abdominal Reflexes:* Absent both sides.

*Patellar Reflexes:* Hyperactive and equal both sides.

*Babinski:* Positive left side, suggestive right.

There is slight motor weakness of left arm and leg but no sensory change. No atrophy present. Co-ordination of left leg practically lost. Gait spastic. Marked intention tremor of left arm present. Slight nystagmus of eyes present. Kernig's Sign: negative.

*Progress:*

On the following day there was a marked change: he was extremely spastic and on even touching the bed clothes would assume the position of opisthotinos. Temperature gradually rose from subnormal to 105.2(A). A spinal tap was performed—fluid clear but under great pressure so that it flowed out of the needle; following this the temperature fell to 101 but in the afternoon gradually rose to 105.3 again. The spastic condition gradually became more marked until that night when he relaxed and expired.

I was fortunate in obtaining permission to perform an autopsy on the head which I did next day: On removing the cranium the dura mater was found to be tense and slightly congested. There were many fine fibrous adhesions over the right cerebrum which were easily broken down. The convolutions were flattened, the C. S. fluid was in excess and the brain tissue markedly oedematous. The brain, after "fixing", I sent to Dr. R. P. Smith which report follows:

Pathological Institute,  
Morris St., December 23, 1937.

Report on Brain of J. L., age 10 yrs. Dr. H. E. Taylor's patient, St. Joseph's Hospital, Glace Bay. Tissue No. 37-7816.

*Description of Brain:* Several incisions into the brain had already been made.

In the right cerebral hemisphere is a large smooth walled cyst the size of an orange. The cyst appears to be distended lateral ventricle, lined by glistening ependyma. The ventricle is so distended as to leave only a thin transparent shell of brain substance externally and has almost completely replaced the temporal lobe. It extends forwards to the frontal lobe, outwards to the parietal lobe and posteriorly to the occipital lobe, all of which are thinned by the distension. In the median portion of the distended ventricle many tough yellow septa are seen stretched across the cavity and the lining wall here is opaque, yellow and fibrous giving the appearance of old inflammatory change. Since this portion had been previously incised, it is difficult to ascertain whether this area was cut off from or continuous with the ventricular distension but the appearances suggest an old chronic inflammatory lesion, such as abscess, which has caused obliteration of the foraminae and so given rise to the hydrocephalus.

In the inferior portion of the cyst is a definite thick wall cavity the size of a plum, in the region of the inferior part of the temporal lobe. The walls of this cavity are  $\frac{1}{4}$ " in thickness and almost cartilagenous in consistency. Some white caseous material still lies in the lumen. The cavity extends to

within about  $\frac{1}{4}$ " of the surface of the brain but no direct connection with the surface could be made out, neither is it in connection directly with the distended ventricle. No abnormality detected in other parts of the brain.

*Microscopic Examination.* Sections of the cavity show the lesion to be of very chronic simple inflammatory nature. There is no evidence of tuberculosis.

*Remarks:* The diagnosis is thus a simple chronic temporo-sphenoidal abscess associated with a right sided internal hydrocephalus, following a suppurative otitis media.

RALPH P. SMITH, M.D., D.P.H.,  
Provincial Pathologist.

### An Unusual Case of Fibroid Uterus with Twists of the Broad Ligament.

Mrs. A. M., age 71.

Admitted to hospital on October 13th, 1937 with the following *complaints*: Pain in the lower abdomen. Nausea and Vomiting. Loss of appetite.

*Menstrual History:* She had menopause at 38. No bleeding since.

*Personal and Family History:* negative.

*Obstetrical History:* 2 pregnancies; no miscarriages.

*Present Illness:* On October 3rd patient suddenly developed a pain in the right side of the abdomen, severe in nature, which later spread across the whole lower abdomen. This pain was relieved somewhat by pressure on the abdomen and for the following week did not bother her a great deal. On October 10th pain became very severe, she was quite nauseated and vomited considerably. This persisted until her admission to hospital.

On admission to hospital her temperature was slightly elevated, pulse was rapid, urinalysis showed one plus albumen with some hyaline casts in the urine and on examination of the abdomen there was a large, quite tender mass occupying the whole of the right side of the abdomen to midway between the level of the umbilicus and the costal margin. Mass was very tense, extremely tender to touch. Blood examination showed 26,600 white blood cells, 3,150,000 red blood cells and Haemoglobin of 65%. Blood pressure 128/80. Vaginal examination, which was difficult, confirmed the presence of the tumor and the diagnosis was thought to be an ovarian cyst with a twisted pedicle.

At operation, on opening the abdomen, the mass was found to be uterine. The whole uterus, both tubes and both ovaries and the both broad ligaments were black in color and the broad ligament had at its base six twists. The uterus, both tubes and both ovaries were removed by total hysterectomy and on opening the uterus, which was symmetrically enlarged to the size of a six to seven months pregnancy, it was found to contain a hard mass the size of a coconut. The operation was done under spinal anaesthetic with excellent results. She was given 1000 c.c. glucose and saline immediately post-operative-

ly and her post-operative course was most uneventful. The wound healed by first intention and she was discharged from hospital on October 30th, seventeen days post-operative.

In commenting on this case, the patient had never been aware of a mass in her abdomen but the condition must have been present for some years. The whole uterus was extremely mobile and the twists came about very gradually with the exception of probably the last one or two which occurred in the ten days previous to her admission. The fibroid in the cavity of the uterus was very hard with a thick calcified shell with a dense fibrous structureless interior but did not show any evidence of malignancy. For a woman of her age, she made a remarkable recovery considering the state of affairs which had been present in her abdomen and the case is reported because of its unusualness.

V. O. MADER and W. G. COLWELL, Halifax.

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## Personal Interest Notes

We are very glad to report that Dr. S. L. Walker, of Truro, our former secretary, is gradually improving in health, although the Doctor is still a patient at the Colchester County Hospital.

Dr. S. G. MacKenzie, formerly of Halifax, has moved to Truro, where he has taken up general practice.

Dr. J. G. Cormier of Sydney is taking a post-graduate course in diseases of the eye, ear, nose and throat at Vienna.

## Minutes of Executive of the Medical Society of Nova Scotia, 1937

THE semi-annual meeting of the Executive of the Medical Society of Nova Scotia was held at the Dalhousie Public Health Clinic, Halifax, N. S., on Friday, November 12th, 1937, at 8.30 p.m.

Dr. Calder, the President, presided and every Branch Society in the Province was represented as follows: Dr. S. W. Williamson, Western Nova Scotia Medical Society: Dr. A. A. Giffin, Valley Medical Society: Dr. D. F. MacLellan, Pictou County Medical Society: Dr. D. K. Murray, Lunenburg-Queens Medical Society: Dr. J. S. Brean, Eastern Counties Medical Society: Dr. D. F. McInnis, Colchester-East Hants Medical Society: Dr. R. P. Smith, Dr. C. M. Bethune, Dr. R. H. Stoddard, Dr. E. I. Glenister, Dr. D. J. MacKenzie, Halifax Medical Society: Dr. W. L. Muir, Treasurer, Dr. H. W. Schwartz, Editor-in-Chief, and Dr. H. G. Grant, Secretary. In addition, there were present at the meeting by invitation, Hon. F. R. Davis, M.D., Minister of Health: Dr. P. S. Campbell, Chief Health Officer: Dr. J. R. Corston, the representative of the Medical Society of Nova Scotia on the Executive of the Canadian Medical Association, and Dr. K. A. MacKenzie, President elect of the Canadian Medical Association.

Dr. Calder in opening the meeting explained that the meeting was called partly to carry out the resolution passed at the last annual meeting of the Medical Society of Nova Scotia, namely, that the Executive shall meet at least once every six months, and also to prepare a brief to the Canadian Medical Association in answer to a letter received from Dr. T. C. Routley, the Secretary of the Canadian Medical Association, which letter is given below.

184 College Street,  
Toronto 2, Nov. 2nd, 1937.

### Re: Rowell Royal Commission

Doctor J. R. Corston,  
46 Coburg Road,  
Halifax, Nova Scotia.

Dear Doctor Corston,

As you are aware, the Executive Committee, meeting in Ottawa last week, instructed the General Secretary to maintain a watching, listening brief during the sessions of the Rowell Commission in various parts of Canada. The Committee also instructed the Chairman and General Secretary to be responsible for the preparation of a memorandum to be placed in the hands of the Royal Commission, dealing with the principles of Federal and Provincial responsibilities in relation to health. This memorandum must be in the hands of the Commission not later than January 1st, 1938.

In order that our representations both by way of memorandum and our attendance at the hearings of the Commission may be most helpful to the profession throughout Canada, I am not directing this letter to one member of the Executive Committee resident in each Province, with the request that he be responsible for the following:

(1) That, not later than November 21st next, there be placed in my hands such brief as your Provincial Medical Association desires to submit in respect to the memorandum. No doubt your Association has definite views on Federal and Provincial responsibilities in



health matters, and we are most anxious that those views be available from every province when the memorandum is being prepared.

(2) I would like to have, as quickly as possible, copies of provincial acts dealing with public health, hospitals, and any other matter which relates to the medical profession. I desire to have this information in order that I may familiarize myself with all health laws that pertain to your province, before sitting in to meetings where representations from your province will be made.

(3) I feel that it is most desirable, and, in fact, essential that each Provincial Medical Association shall appoint one or more of its members to represent it when the Commission sits in your province, in order that your General Secretary may have the advantage which will come from close co-operation with your representatives from session to session.

In as much as this matter was discussed at length in the Executive Committee which presented an opportunity for each member to be thoroughly familiar with the plan, I am sending this letter to you with the urgent request that you make it your responsibility at once to see that the information asked for is supplied. A copy of this letter is being sent to the Secretary of your Provincial Medical Association for his information.

When all the provinces have been heard from, a very real responsibility rests upon the Chairman and General Secretary, in preparing the memorandum, bearing in mind that the dead line for its submission to the Commission is January 1st next. If time permit, it would be my desire to have memorandum, when drafted, sent to each provincial representative on the Executive Committee for an expression of opinion; but, whether or not this will be possible, I cannot say. A good deal will depend upon how promptly all the provinces send in the material asked for. Most earnestly do I bespeak your prompt and complete co-operation.

Thanking you, I am

Yours faithfully,

(Signed) T. C. ROUTLEY,  
General Secretary.

The President explained that it had been planned to have our Executive meeting about January 11th, but since Dr. Routley asked for an answer to his letter not later than November 21st, it was necessary to call an emergency meeting. As the letter from the Canadian Medical Association called for an expression of opinion from the Medical Society of Nova Scotia on Federal and Provincial relations in all matters of health the following subjects were brought up for discussion: Health Insurance; Medical Relief; the present relations between the Federal and Provincial Governments in matters of Health; Workmen's Compensation; Medical Education and Licensure. It was agreed by the Executive that Workmen's Compensation, Medical Education and Licensure should not be considered in the discussion.

Health Insurance was discussed first. The Secretary stated the Medical Society of Nova Scotia had never gone on record regarding Health Insurance. He referred to the Report of the Committee on Economics of the Canadian Medical Association of 1934 and read to the Committee the seventeen principles advocated by them. Dr. J. R. Corston stated that although the Canadian Medical Association had never committed themselves to Health Insurance they had advocated the study of a Federal scheme of Health Insurance by a Royal Commission. Dr. Corston suggested that we might reply stating that although we were not advocating Health Insurance, that if it were adopted we subscribe to the seventeen principles set forth by the Canadian Medical Association.

The discussion then swung into Medical Relief. The Secretary brought to the attention of the Executive the discussion of Medical Relief in 1933. At

this time a delegation representing the Canadian Medical Association interviewed The Hon. R. B. Bennett, then Prime Minister of Canada, asking that permission be given by the Federal Government to the Provinces or Municipalities to spend relief money for medical services to the indigent. They were told by Mr. Bennett that Medical Relief was entirely a provincial responsibility, but that the Federal Government would always give sympathetic consideration to applications for financial aid from communities where the burden of medical relief was unduly onerous. The Hon. F. R. Davis, Minister of Health, stated that medical relief was at present a provincial responsibility. The President, Dr. Calder, asked for an expression of opinion regarding relief. He pointed out that although Federal money may now be used for food, clothing and fuel that under the British North America Act it was not legal to pay medical fees with it. Dr. Corston asked Dr. Davis whether under the present arrangements Federal money could not be spent for medical relief. Dr. Davis replied that there was no indication on the part of the Federal Government of taking over Medical Relief. Dr. H. W. Schwartz referred to the situation in Ontario where the Provincial Government has assumed responsibility for medical relief and looked to the Ontario Medical Society for administration. Dr. Corston pointed out that the Federal Government were paying medical relief in Saskatchewan. Dr. Davis explained that this was an emergency matter. Dr. McLellan referred to medical relief in the Town of Truro during the depression when the town paid \$100.00 a month for medical services to the indigent. He suggested we appeal to the Federal Government to assume responsibility for medical relief. Dr. D. J. MacKenzie asked for information regarding the percentage of people on relief in Nova Scotia. Dr. Davis stated there was relatively less relief in Nova Scotia than any other province in Canada, except Prince Edward Island. Dr. Langille felt that the medical profession in Nova Scotia were not getting a fair deal in the matter of medical relief. Dr. P. S. Campbell explained that the indigent were taken care of under the Poor Relief Act. Dr. Corston stated that the medical profession were not satisfied with the remuneration they received from the Overseers of the Poor. Dr. Schwartz asked if the Act were clean cut as to remuneration and Dr. Campbell replied that it was by arrangement between the physician and the Overseers. Dr. MacLellan moved "that the Medical Society of Nova Scotia favour a Federal scheme of Medical Relief for the indigent and that this be brought up before the Rowell Royal Commission." Dr. Muir seconded the resolution. Dr. Williamson did not see any point in the resolution unless the British North America Act was first amended. The resolution was carried.

The discussion on Health Insurance was continued. Dr. MacLellan moved that the Medical Society of Nova Scotia favour the Rowell Royal Commission investigating Health Insurance with special references to cost and the remuneration to the general practitioner for services to the indigent. Dr. Langille moved that the Executive approve of a Federal scheme of Health Insurance. Dr. Grant moved a resolution to the effect that although the matter was not urgent in Nova Scotia and had not been seriously considered by our Society, still if Health Insurance came to pass, the Society would favour a Federal plan. Dr. McLellan seconded this resolution. Dr. Corston objected to this resolution and suggested that we should go no further than to recommend the exploration of the question by the Rowell Commission in the hope that they would give us sufficient information to express an opinion. Finally Dr.

D. J. MacKenzie moved the following amendment to Dr. Grant's motion—"In view of the fact that Health Insurance has never been a very vital issue before the Medical Society of Nova Scotia the Executive is not in a position to recommend any form of Health Insurance. We recommend further exploration of this matter by the Rowell Royal Commission." The amendment was seconded by Dr. Glenister and carried.

The question of the responsibilities of the Federal and Provincial Departments of Health was next discussed. Dr. P. S. Campbell was asked to outline the present situation which he did at some length defining the responsibilities which are now Federal and those which are provincial. Dr. Corston asked whether the Executive would favour an enlargement of the powers and functions of the Federal Department of Health so that they could deal with special diseases, such as cancer and tuberculosis. Dr. Davis pointed out the difficulty from the administration side having the Federal Department responsible for the control of certain diseases and the Provincial Department others. Dr. Grant moved that the Medical Society of Nova Scotia was satisfied with the present relations between the Federal and Provincial Governments in matters of Health. Dr. Williamson felt that our present organization was more efficient than if administered from Ottawa. The resolution was seconded by Dr. MacLellan and carried.

The next item was the appointment of a Committee on Economics. It was moved by Dr. MacLellan, seconded by Dr. Williamson and carried that the President, the Secretary and Dr. J. R. Corston appoint this committee.

The President then spoke regarding financial arrangements for next year's meeting of the Canadian Medical Association, and thought it would be only fair to call on the different members in the Province to assist in this. He thought if a certain fee were set some might resent it, and that it would be a good thing in a short time to write to the Secretaries of each Branch Society to ask each member how much they would contribute. The President pointed out there would be guests here from Canada, the United States and England. Dr. Corston stated that in 1905 when the Canadian Medical Association met in Halifax the Medical Society of Nova Scotia was host, and the Halifax Medical Society was deputed to look after the entertainment, as they have been now. There was a local committee of arrangements at Halifax, that taxed the resident members of the profession in Halifax in varying amounts: the bulk of the money was received in that way, but also each member from outside of Halifax was asked to contribute five dollars when he registered.

Dr. Muir stated that since the last meeting of the Canadian Medical Association in Halifax in 1921 the structure of the Medical Society of Nova Scotia has been considerably changed. At the time of that meeting there was no real organization as there is today. Then there was a committee appointed that succeeded in raising something like \$2500.00. There were twenty-five from outside who gave a total of \$200.00, and the rest was raised in Halifax. The Secretary was asked to write to each member on the register asking him if he were willing that a draft should be made upon him for a certain amount.

After a short discussion it was decided that the Secretary should write a letter to the Secretaries of each Branch Society in the district covered by the Society, submitting a list of doctors, and ask that this list be returned showing the amount each member was willing to subscribe. It was also suggested that at the time of registration those who had not subscribed should be asked for a donation. It was also decided that the President should speak to the members

of the profession through the medium of the Medical Bulletin sometime after the first of the year regarding subscriptions for the entertainment in June.

Dr. Corston called to the attention of the meeting that Dr. Routley's letter asked for the appointment of representatives from the Medical Society of Nova Scotia to appear before the Rowell Royal Commission when it sits in Nova Scotia. Dr. Grant was nominated by Dr. Williamson and seconded by Dr. Brean. Dr. Corston was nominated by Dr. Schwartz and seconded by Dr. MacLellan. As there were no other nominations Dr. Corston and Dr. Grant were appointed.

Regarding the meeting of the Canadian Medical Association at Halifax next June it was agreed that the Medical Society of Nova Scotia should have the usual annual dinner and that representatives from the Canadian Medical Association, the other provinces and the guests of the Canadian Medical Association from outside of Canada be invited to this dinner.

Dr. Calder called the attention of the Executive to the fact that at last year's annual meeting held at Pictou Lodge the Nominating Committee had omitted to appoint a Library Committee. It was moved by Dr. D. J. MacKenzie, seconded by Dr. McInnis and carried that this committee be appointed by the chair.

The Secretary then read the following letter from Dr. Routley:

184 College Street,  
Toronto 2, September 17th, 1937.

**Re: Pasteurization of Milk**

Doctor H. G. Grant, Secretary,  
Medical Society of Nova Scotia,  
Dalhousie University, Halifax, N. S.

Dear Doctor Grant,

At our last annual meeting, it was recommended to the General Council that the Association take some active steps towards intensifying the campaign which is going on across Canada with respect to compulsory pasteurization of milk which is sold to the public.

In order to canvass the situation and determine what course should be pursued by the C. M. A., I have been instructed to address each of the Provincial Medical Associations as follows:

- (1) What is the actual situation now in your province with respect to pasteurization of milk?
- (2) Has your Association made any official pronouncement with respect to compulsory pasteurization?
- (3) Does your Association wish the C. M. A. to take any active steps in connection with this matter; and, if so, in what direction so far as your province is concerned?

After the nine provinces have been heard from,—(and it would be appreciated if this information could be received in the course of the next three weeks)—the Executive Committee will be in a better position to decide what our policy should be.

Thanking you in anticipation of your kind cooperation, I am,

Yours faithfully,

(Signed) T. C. ROUTLEY,  
General Secretary.

Dr. P. S. Campbell was then asked to inform the Executive on the status of pasteurization throughout the province. Dr. Campbell stated that pasteurization was becoming gradually adopted in Nova Scotia. He said there were

few towns in the province that did not have at least one pasteurizing plant. He referred in particular to Wolfville, the only town in the province where pasteurization is compulsory and to Halifax where from 85% to 90% of all milk consumed is pasteurized. Dr. Campbell stressed the value of further education in this matter. Dr. MacLellan suggested the Medical Society of Nova Scotia circularize the Mayors of all the towns in Nova Scotia bringing to their attention the value from the health standpoint of pasteurized milk. Dr. Grant moved that in reply to Dr. Routley's letter the Medical Society endorse without any reservations the pasteurization of milk and would welcome any publicity the Canadian Medical Association would see fit to give to this matter in the Province of Nova Scotia. This was seconded by Dr. D. J. MacKenzie and passed. It was also agreed that Dr. P. S. Campbell and the Secretary prepare a statement for the press giving the endorsement of the Medical Society of Nova Scotia to pasteurization and that copies be sent to the Mayors of each town in the Province.

At the annual meeting at Pictou Lodge when it was decided that the Executive should meet at least once every six months it was agreed by the Society that part of the expenses of the Executive should be paid out of general funds. After some discussion it was moved by Dr. D. J. MacKenzie and seconded by Dr. Bethune that a mileage rate of ten cents (10c), one way, be paid to members attending from outside of Halifax. Agreed.

The meeting adjourned at 12.10 a.m.

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**“Stone walls do not a prison make Nor iron bars a cage.”**

Winter is a jailer who shuts us all in from the fullest vitamin D value of sunlight. The baby becomes virtually a prisoner, in several senses: First of all, meteorologic observations prove that winter sunshine in most sections of the country averages 10 to 50 per cent less than summer sunshine. Secondly, the quality of the available sunshine is inferior due to the shorter distance of the sun from the earth altering the angle of the sun's rays. Again, the hour of the day has an important bearing: At 8.30 a.m. there is an average loss of over 31%, and at 3.30 p.m., over 21%.

Furthermore, at this season, the mother is likely to bundle her baby to keep it warm, shutting out the sun from Baby's skin; and in turning the carriage away from the wind, she may also turn the child's face away from the sun.

Moreover, as Dr. Alfred F. Hess has pointed out, “it has never been determined whether the skin of individuals varies in its content of ergosterol” (synthesized by the sun's rays into vitamin D) “or, again, whether this factor is equally distributed throughout the surface of the body.”

While neither Mead's Olcum Percomorphum nor Mead's Cod Liver Oil Fortified With Percomorph Liver Oil constitutes a substitute for sunshine, they do offer an effective, controllable supplement especially important because the only natural foodstuff that contains appreciable quantities of vitamin D is egg-yolk. Unlike winter sunshine, the vitamin D value of Mead's anti-ricketic products does not vary from day to day or from hour to hour.

# CANCER SECTION

## CONCERNING CANCER

### ARTICLE II

GEORGE H. MURPHY

WHAT is Cancer Control? I think it was Lord Haldane that said words were but symbols for the expression of thought, and rather poor ones at that. Barrie wrote in his own inimitable way of the time, effort and cost required oftentimes to determine what a legislator really meant to express when he framed a certain law. Nine chances out of ten the legislator himself does not know, and so it becomes anyone's guess until the inevitable commission takes it over for good or ill. Both fates have about equal chances.

Well, one wonders if the inventor of the phrase, Cancer Control, could tell exactly what was in his mind at the time. Perhaps like Topsy, acute abdomen and liver complaint, it just growed and made itself so useful we allowed it to stay about the place and do the chores. The people know he is a harmless, though rather stupid prodigy, and they rather like him for his good intentions. We send him out, every now and then, to roam among the masses of the unintelligent to bring hope and assurances that we, the men of science, are standing by with great hoardes of knowledge, and everything is bound to be all right. The prodigy usually bears a placard across his back on which is printed the words, *Cancer Control*.

How far the medical profession is responsible for the control of cancer is a question. I think we are only partly responsible; which lets us out a bit, for the job is not being well done. And what is more, the immediate outlook for better things is not too bright. In a world of realism there is nothing more real than cancer, and there is nothing more real than the disagreeable truth that, with our present knowledge, we can not stop cancer from beginning, and this is close to saying that cancer, as such, is quite outside any method of control we know.

Not so tuberculosis. A big job too, but the logic and principles concerned are as clear, convincing and practical as any that ever linked up a thoroughly understood *Cause* with an equally observable *Effect*. The habit some over zealous propogandists cultivate of declaring cancer to be just as controllable as tuberculosis is, therefore, unfortunate and misleading, for the best of all good reasons, namely, that it simply is not so. The banner of the cancer crusade bears the word *Cure*; that of tuberculosis, the word *Prevention*. Cure in the latter, important to the individual attacked, is but an incident in a carefully planned aggression to block the lines of communication between spreader and public, and starve out the bacillus before it can renew itself in vigor and virulence in more congenial soil.

Cancer, alas, is more subtle, and while its life in the human tissue is now routine knowledge, its eccentricities well marked and its malignant process

grasped and appraised by our profession, it has succeeded in concealing the malign dictator that sends the first cell on its harmful course.

Quite obviously, therefore, any efforts we put forth, just now, on managing and controlling cancer must be based on what we know of the life and ways of the disease. By and by, from one of the great research laboratories of the world or from some obscure hamlet, where unconscious genius found an abode, will come the glad tidings of an essential cause. Then we can pull down our temporary structures and rebuild with confidence on the rock bottom of fundamental knowledge.

My own mind is, therefore, quite clear on the part we should take on the control issue. Let our temporary structures be used to their full limit, and add to their numbers if necessary.

The Federal government will be advised by Dr. Routley, speaking for the Canadian Medical Association, that a Department of Cancer Research should be created at Ottawa, and operated, of course, at government expense. Such a move will be strongly supported in Nova Scotia, but I think we should let the research element in cancer control rest there so that all our efforts in organization, education and voluntary financial aid may be directed to one main objective, namely, *Early Reporting of Signs and Symptoms of Cancer*.

Heavens knows how often this has been said; but we must keep on shouting it until it becomes part of the routine of normal citizenship to keep posted on the early subtleties of this archenemy of society. I don't like the phrase, "making the public cancer conscious". It suggests fear, and while an element of fear may be wholesome enough, yet it may beget a phobia that is as fatal to intelligent action as ignorance itself.

We have gazed so long into space watching for a star that we have lost our vision for things close by. I fear the public have caught our ineptitude. The press blazes forth as established scientific truth what, most of the time, is nothing more than the hopes of some over zealous investigator or specialist. You and I know that if we had at every Cross Roads in Nova Scotia an institute for the treatment of cancer, modern and equipped with every resource, we should still be fumbling with palliative measures unless we got the cases early. So long as John Smith and Mary Jones, the one with a lump in her breast, the other with an unhealing ulcer on his lip, go about quite oblivious of their danger, just so long will our cancer results remain as unsatisfactory as they are. Ask any member of the cancer clinic at the Victoria General Hospital what he thinks of the tragic indifference, or whatever it is, that keeps the cancer victim away from proper help until the golden season for cure is either completely gone, or has left but a trailing glimmer of its former hope, and he will a tale unfold which, among many thoughts, will make us wonder whether we are doing all we should to enliven and train the public attitude in the way of cancer defence.

Boiled down, then, our situation seems about this:—Our resources for the treatment of cancer in this province are reasonably adequate. There are some twenty four hospitals where major surgery is being done. Some are equipped for X-ray therapy. Halifax has a cancer clinic and besides other agencies has a supply of radium. We are not, therefore, greatly concerned about the adequacy of our facilities for treating cancer. We are left entirely free to go into a huddle with the public, the department of health, the medical societies and the philanthropic individuals and clubs on ways and means of effecting sane and simple education on cancer control, so that cancer victims

will no longer ignore proper help until, like the foolish virgins, there is little oil in their lamps, and the flame is dim and flickering.

The Department of Health led the way in making tissue examinations free in Nova Scotia, and it is still doing its part in an educational program. Closer cooperation with this department might be our best start in a new crusade.

Some discussion on the form and character of public education on cancer might be in order next, if BULLETIN readers are not already growing awearry.

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## OBITUARY

We regret very much to announce the death of Dr. Raymond I. Gillis, which took place at his home at Baddeck, December 26th, 1937, following a prolonged illness. Dr. Gillis was forty-two years of age. Dr. Gillis, who was a son of Mr. and Mrs. M. K. Gillis of Sydney Mines, first attended St. Francis Xavier University and later graduated in medicine from the Dalhousie Medical School in 1922. He was first associated in practice with Dr. W. T. McKeough, of Sydney Mines, later moving back to Baddeck where he practised for fifteen years. Dr. Gillis is survived by his widow, one daughter, his parents and four brothers.

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Dr. Thomas Armstrong passed away the morning of December 15th, 1937, at his residence, 9 South Street, Halifax, after several month's illness. Dr. Armstrong was a native of Scotland, having been born at Glasgow. For a number of years he served as surgeon on the cable ship, John W. MacKay. He also practised in the north end of Halifax for a number of years. Dr. Armstrong is survived by his widow, and one brother, Dr. Robert Armstrong, England.

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The BULLETIN extends sympathy to Dr. W. J. Keating of Halifax in the loss of his father, Mr. James P. Keating, who died at Halifax, December 30th, 1937, and to Mrs. W. J. Keating in the loss of her father, Mr. Thomas W. Healey of Halifax, on December 28th, 1937.



A long list of "do's and "don't" to guide them to success and popularity among patients has been offered students of the Westminster Hospital Medical School, London by Sir Seymour Hicks, actor-manager, speaking as a "patient of 65 years standing."

"I have enjoyed a great many very pleasant illnesses in my time," he said. "In fact, at times, I have almost been a professional patient. That is my only excuse for having the temerity to come here and give you a few scraps of advice to remember when you leave the hospital and embark on general practice."

Here are Sir Seymour's do's and don't for young doctors:

Don't keep your patients waiting.

Don't let your wife talk about medicine and surgery in private life.

Don't try and impress on us that you're attending Lord and Lady Lipstick.

Don't allow scandal to be talked in your presence.

Don't go to the moneylenders.

Don't talk medical shop in mixed company.

Do always dress for the part.

Do cultivate an easy, smiling manner.

Do employ a smiling parlormaid to open the door.

Do be definite, even if you're wrong.

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# Department of the Public Health

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 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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 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).

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 Dickie, W. R., Digby.  
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 Sodero, T. C. C., Guysboro (Mcpy).  
 Moore, E. F., Canso.  
 Monaghan, T. T., Sherbrooke (St. Mary's Mcpy).

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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).

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 Boudreau, Gabriel, Port Hood, (Mcpy. and Town).  
 Proudfoot, J. A., Inverness.

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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 December 1st, 1937 to January 1st, 1938.**

During the month, 220 tissues were sectioned and examined, which, with 16 tissues from 5 autopsies, makes a total of 236 tissues.

Tumours, simple.....	16
Tumours, malignant.....	35
Tumours, suspicious of malignancy.....	2
Other conditions.....	167
Tissues from 5 autopsies.....	16

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

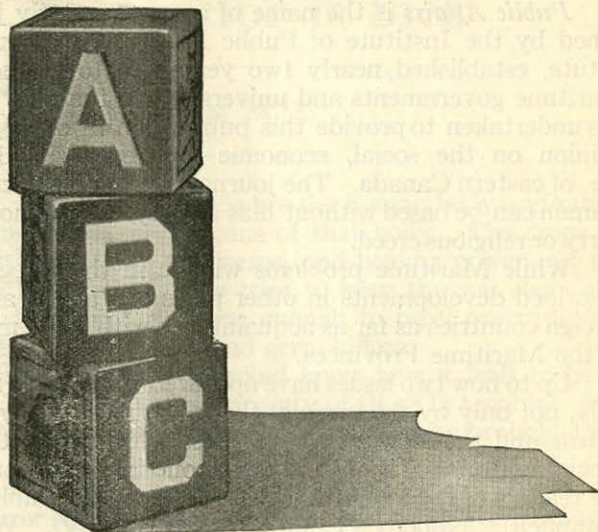
County	Chickenpox	Diphtheria	Influenza	Measles	Mumps	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc.-pulmonary	V. D. G.	Whooping Cough	Impetigo	Epidemic Jaundice	German Measles	Catarrhal Jaundice	Tinea Circinata	Septic Throat	TOTAL
Annapolis.....	1						1												4
Antigonish.....																			
Cape Breton...	2	5			1	6	3	48		1		11		7					84
Colchester.....										1									1
Cumberland...																			
Digby.....			1							1						3			5
Guysboro.....				30						1					1				32
Halifax City...	7	15		1	4			8											35
Halifax.....	1	2			4														7
Hants.....											1								1
Inverness.....																			
Kings.....			4					1					1						6
Lunenburg.....																			
Pictou.....										2	1								3
Queens.....																			
Richmond.....																			
Shelburne.....			52	75			1	4	1								6		139
Victoria.....	2							7											9
Yarmouth.....			14	4			3	1			4	5		18					49
<b>TOTAL.....</b>	<b>13</b>	<b>22</b>	<b>71</b>	<b>110</b>	<b>9</b>	<b>6</b>	<b>8</b>	<b>69</b>	<b>1</b>	<b>6</b>	<b>8</b>	<b>16</b>	<b>1</b>	<b>25</b>	<b>1</b>	<b>3</b>	<b>6</b>	<b>..</b>	<b>375</b>

Positive cases Tbc. reported by D.M.H.O.'s. 32.

**RETURNS VITAL STATISTICS FOR NOVEMBER, 1937**

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis.....	13	9	7	6	2	2
Antigonish.....	5	10	12	5	4	0
Cape Breton.....	115	89	72	58	42	3
Colchester.....	21	28	24	11	12	2
Cumberland.....	31	33	27	22	11	0
Digby.....	11	11	22	7	12	0
Guysboro.....	11	12	6	3	6	0
Halifax.....	84	72	81	51	49	7
Hants.....	12	11	11	5	2	1
Inverness.....	19	17	15	8	11	1
Kings.....	24	16	7	18	8	0
Lunenburg.....	22	16	19	24	17	1
Pictou.....	21	21	26	18	23	2
Queens.....	10	15	5	1	9	0
Richmond.....	11	3	5	4	1	0
Shelburne.....	8	15	4	10	7	1
Victoria.....	6	4	5	4	2	0
Yarmouth.....	15	16	16	6	7	0
	<b>439</b>	<b>398</b>	<b>364</b>	<b>251</b>	<b>225</b>	<b>20</b>

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CANADA

### A New Maritime Quarterly

*Public Affairs* is the name of a new quarterly journal that is being published by the Institute of Public Affairs at Dalhousie University. The Institute, established nearly two years ago to promote co-operation between Maritime governments and universities in the field of Public Administration, has undertaken to provide this publication in order for an enlightened public opinion on the social, economic and educational problems affecting the life of eastern Canada. The journal will offer the material on which public opinion can be based without bias or prejudice without favour to any political party or religious creed.

While Maritime problems will be in the foreground, there will also be described developments in other parts of Canada and the United States and foreign countries as far as acquaintance with these may be useful to the people of the Maritime Provinces.

Up to now two issues have appeared which have been received very favourably, not only by the press of the Maritimes but by papers like the *Montreal Gazette* and the *Winnipeg Free Press* which made the journal the subject of special editorials. *Public Affairs* contains many articles which will interest the readers of the *MEDICAL BULLETIN*, such as "Public Health Nursing", (P. S. Campbell), "Nobody's Child", (R. H. Murray), "What is Wrong with Social Credit?", (R. B. Pryce), "Prison Reform in England and Canada", (T. E. Harvey, M.P. and John Kidman), "Youth Cn Relief", (L. Richter), "The Larger School Unit", (B. A. Fletcher and G. A. Ferguson) and "Vocational Education in New Brunswick", (W. K. Tibert). In the next issue there will appear articles on "The Health Insurance Scheme in British Columbia" and "Problems of a Country Doctor".

Thanks to an endowment of the Rockefeller Foundation and in order to give a wide circulation to the journal, the annual subscription fee has been kept as low as 50c. The journal may be obtained either from news dealers in the Province or from the Imperial Publishing Company in Halifax.

A man entered the out-patient department of the Victoria General Hospital. His head was enveloped in bandages.

"Are you married"? asked the doctor.

"No", replied the man, "I've been run over".

Mrs. Murphy: "There is no living with William any more since he became famous."

Mrs. Neerby: "I didn't know he had become famous. How did it happen?"

Mrs. Murphy: "He had his picture printed in the paper telling how he had been cured by liver pills and now he won't do a lick of work."

**Drastic**—Doctor (examining ambulance class): What would you do if, after artificial respiration, a drowning person showed signs of life?

Student: Give him a drink of water.