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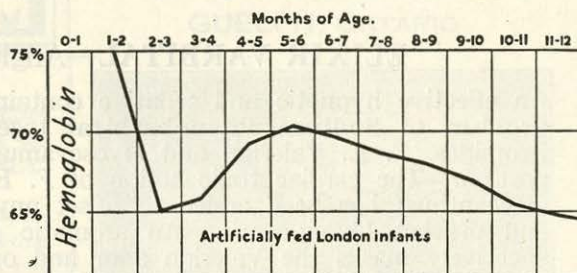
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For these reasons, and also because of the low hemoglobin values so frequent among pregnant and nursing mothers (Coons,⁴ Galloway⁵), the pediatric trend is constantly toward the addition of iron-containing foods at an earlier age, as early as the third or fourth month. (Blatt,⁶ Glazier,⁷ Lynch⁸).

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1. Many foods reputed to be high in iron actually add very few milligrams to the diet because much of the iron is lost in cooking or because the amount fed is necessarily small or because the food has a high percentage of water. Strained spinach, for instance, contains only 1 to 1.4 mg. of iron per 100 gm. (Bridges.⁹)
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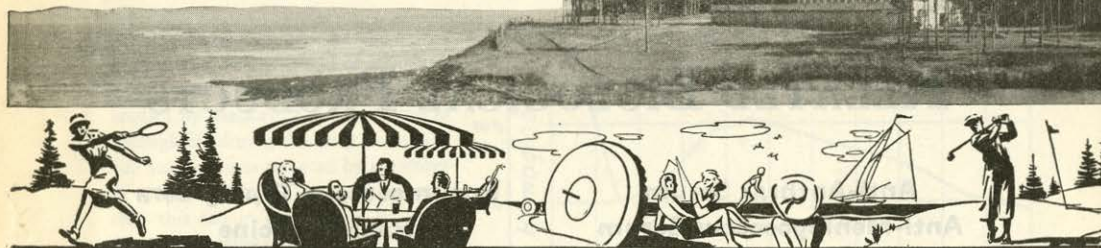
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The Normal Mechanisms Controlling Breathing

C. B. WELD, M. D.

WE have long been accustomed to consider that the normal control of breathing could be sharply separated into two divisions, namely chemical and nervous. In discussing the former we have said that carbon dioxide excess or oxygen deficiency stimulated the respiratory center and in regard to the nervous mechanisms have usually been content to instance certain examples such as the stimulating effect of cold on the skin or the inhibition of breathing during the act of swallowing.

In general, the chemical mechanisms have been held responsible for the total quantity of respiration per minute, and the nervous mechanisms for the type and smoothness of breathing. These conclusions are in the main unchanged, but the exact details have been subjected to close scrutiny and more precise inferences and new viewpoints obtained. It must be realized of course that the proper coordination of the activity of the many muscles involved in respiration is of necessity a matter of nervous integration. Anything affecting the respiratory rhythm—even the chemical mechanisms—must act through the nervous system, either reflexly or directly through the respiratory centers.

Perhaps the two most important advances which have led to the newer investigations have been firstly the discovery of the carotid sinus mechanisms and secondly the development of radio tubes and the adaptation of such amplifying systems to the study of nerve impulses. By such electrical apparatus concurrent records of the respiratory act, of afferent nerve impulses from known sources and of efferent impulses to respiratory muscles, can be obtained. The importance of such synchronous records in evaluating the several factors involved is obvious.

Let us first consider the motor side of the respiratory mechanism. Electrical recordings from motor nerves to respiratory muscles show rhythmical bursts of nerve impulses synchronizing with the respiratory rhythm. Thus nervous activity is detected in the phrenic nerve just before and during the active part of the inspiratory act and it is quiescent during expiration. In a similar manner, the external intercostals are found to contract on inspiration and the internal intercostals on a forceful expiration. The strength of the inspiration is determined by (a) the number of nerve impulses per second passing along a single nerve fibre, (b) the number of nerve fibres involved and (c) the duration of the burst of nerve impulses. It is apparent then that the respiratory rhythm is due to a rhythmical discharge of nerve impulses from the center along the motor nerves; it now becomes necessary to ascertain the factors which modify the activity of the center. These factors will of course be the various afferent nerve impulses which come to the center and the effect of any change in the fluid environment of the cells of the center. It is usually believed that the rhythmic activity of the center is spontaneous and a property of the center itself and that this is merely modified in degree by the extraneous

influences. However it is not practicable to remove absolutely all the afferent nerve impulses which may arrive at the center so it is possible that the center is acting as part of a reflex mechanism and that it has no spontaneous activity of its own. This idea is held by some.

It is well known that in an ordinary individual, a degree of anoxemia will result in increased breathing and this has been thought to be brought about by direct stimulation of the respiratory center by the anoxemia. It has now been found however that if the carotid body is denervated, anoxemia not only fails to stimulate breathing but generally depresses it. Accordingly we must conclude that insofar as the center is concerned, an oxygen deficiency acts as a depressant and that the apparent stimulating effect of anoxemia is a reflex mechanism acting through the carotid sinus. Of course if the anoxemia is severe the center becomes so depressed that it can no longer respond properly even to reflex stimulation, and breathing will eventually cease. Such a severe degree of anoxemia is not commonly met with in ordinary practice but it seems to be the cause of respiratory failure in some new born infants and in cases of raised intracranial pressure. In these latter instances a rise in blood pressure is often associated with improved breathing because of a better blood supply to the medulla. In normal individuals with an adequate cranial circulation a rise in blood pressure depresses breathing.

In so far as the purely nervous mechanisms are concerned, probably the most important from our point of view is the Hering-Breuer Reflex. This reflex is due to the stretching of the walls of the pulmonary alveoli causing stimulation of the nerve endings of the vagus nerve. Consequently afferent vagal impulses pass up to the respiratory center with every inspiration and they check the inspiration by inhibiting the respiratory center. Closer study of these impulses shows that the frequency of the afferent vagal impulses from the lung is greatest when the lung is fully inflated, less when the lung is partially inflated and nil when it is deflated. Thus in shallow breathing some afferent impulses are ascending the vagus in all phases of the respiratory cycle while in deep breathing many such impulses are found during the inspiratory phase and none during the expiratory phase. The arrival of these afferent vagal impulses at the center will affect breathing in one of two ways, even though in each case it inhibits the center. If they should reach the center when it is discharging motor impulses, (i.e. during inspiration) this burst of motor impulses will be stopped and inspiration ended. This is the type of reaction to be found in ordinary moderate or deep breathing. Under such circumstances the next inspiration will be brought on sooner as the paucity of afferent impulses in the expiration phase is not delaying the onset of the next discharge of the center. On the other hand if the afferent impulses should reach the center when it is quiet and not discharging motor impulses (i.e. during expiration) the onset of the next burst of motor impulses and the next inspiration will be delayed. This type of reaction is most likely to be observed in shallow breathing: the respiratory rate would be moderated because the vagal impulses reaching the center during expiration would delay the next inspiration, and also because during the inspiration (as it is a shallow one), the number of the vagal impulses reaching the center are insufficient to effectively check the inspiration.

Thus it would seem that in normal individuals the Hering-Breuer Reflex is an important stabilizing factor in regard to the respiratory rhythm. It tends to speed up a slow respiratory rate and to slow down an excessively rapid one.

Unfortunately however in certain abnormal states it may not be allowed to exert this moderating influence and may even adversely affect breathing. For example the rapid shallow breathing of pneumonia and other congestive and inflammatory lung lesions is largely due to a misuse of this reflex mechanism. The reduced distensibility of the lung parenchyma enhances the sensitivity of the reflex and consequently inspiration is checked earlier and initiated sooner than in normal lung. Incidentally the shallow breathing which results, in itself is an important cause of anoxemia. This, through the carotid body mechanism accentuates the rapid breathing and a vicious circle is set up. Oxygen may relieve the cyanosis and yet allow the shallow breathing to persist. Carbon dioxide will aid in deepening the respirations.

Other nervous mechanisms are of interest, of which the following examples are perhaps the most striking. Respiration is inhibited during the act of swallowing, by virtue of afferent impulses passing up the glossopharyngeal nerve. Pungent or irritating gases by stimulating the nasal mucous membrane may stop breathing. A sudden increase in blood pressure may inhibit breathing by stimulating the carotid sinus or arch of the aorta. Adrenalin apnoea is probably an example of this reaction. The afferent impulses so initiated reach the respiratory center indirectly: their function is primarily to depress the blood pressure. The effect of the higher centers of the brain is well shown by the voluntary and emotional power over respiration and by the inhibition of inspiration during the acts of singing or talking. However, the effect of stimulating most peripheral sensory nerves is to stimulate breathing, increasing the quantity of respiration or pulmonary ventilation per minute. This may be brought about by the effect of cold on the skin. Experimentally this mechanism is well shown (in the dog) by stimulating the saphenous nerve which regularly produces increased breathing. If the vagi are intact the increase will largely be in rate while if the vagi are cut and the Hering-Breuer reflex out of action, the depth will be chiefly affected.

The last mechanism which we wish to consider is the powerful stimulating effect of carbon dioxide. It is sometimes called the "Respiratory Hormone" and serves in the main to regulate the quantity of respiration to suit the metabolic needs of the body. Its rapid accumulation in the body makes it impossible for us to hold our breath for long and of course the therapeutic uses of carbon dioxide as a respiratory stimulant are well known. Its removal as by voluntary forced breathing experiments or by excessive ventilation in artificial respiration results in apnoea. It acts chiefly by directly stimulating the respiratory center though it also acts reflexly in the same direction through the carotid body. This latter action is a weak one. Gesell has pointed out at least one way by which this stimulating action of carbon dioxide may occur. It appears to depress the activity of the respiratory reflexes, and as the vagal inhibitory reflex is usually more active than the sensory nerve stimulating reflex, the result is usually a diminishing of the effectiveness of the Hering-Breuer reflex and a deepening of breathing.

Gesell too has successfully shelved for the time being at least, the old problem as to whether carbon dioxide or the acidity of the blood is the primary stimulus to breathing. His explanation is simple and rational even though direct proof for it is as yet lacking. He believes that the primary factor is the acidity of the protoplasm of the cells of the respiratory center. This of course could be altered by a change in the acidity of the blood supplying the center but it would also be affected by the metabolism of the cells themselves.

Carbonic acid will usually be the predominating factor both because it is produced so freely and because it diffuses with exceptional rapidity from the blood into the cells of the center and therefore affects their acidity more readily than can other acids. In this connection it must be pointed out that probably the presence of inorganic ions other than the hydrogen ion is also important in establishing the activity of the respiratory center. Little is known about these reactions but the balance between the calcium and the potassium of the fluid bathing the center is significant. An excess of calcium stimulates and an excess of potassium depresses respiration.

To sum up briefly, it may be said that the respiratory center sends out motor impulses in a rhythmic manner to the muscles of respiration to cause inspiration. In ordinary quiet breathing, expiration is mostly a passive act. The rate and strength of these bursts of activity on the part of the respiratory center is affected by both exciting and inhibiting factors. Among the stimulating factors are the effect of carbon dioxide on the center itself, and the effect of sensory impulses from most sensory nerves. Among the inhibitory factors are the vagal impulses from the lung itself and the group mechanisms concerned with the niceties of breathing—the adjustment for speech, for swallowing and so on. Anoxemia, when present, stimulates breathing reflexly through the arotid sinus, unless the anoxemia is severe when the center is so depressed that it cannot respond to the stimulating reflex mechanism.

What is the Argyll Robertson Pupil?

H. W. SCHWARTZ, M.D.

BEFORE discussing the pupillary peculiarities it may be of interest to say a few words concerning the observer with whose name they are associated. Douglas Moray Cooper Lamb Argyll Robertson was born in 1837 and died in 1909. He was the son of Dr. John Argyll Robertson a surgeon of Edinburgh who became President of the Royal College of Surgeons of Edinburgh in 1846. The son graduated M.D. from St. Andrews in 1857 and shortly after went to Berlin to study under von Graefe. Argyll Robertson was one of the first in the United Kingdom to adopt ophthalmic surgery as an independent profession throughout his career. On settling in Edinburgh he acted for a time as Assistant to Prof. Bennett and in this capacity conducted the first course in practical physiology. He was admitted to the F.R.C.S. of Edinburgh in 1862 and about the same time he won world wide recognition when he published his observations on the effect of the active principal of the Calabar Bean, i.e., physostigmine or eserine, in constricting the pupil. He thus discovered a satisfactory myotic the need of which had long been felt by oculists. When you think of glaucoma you think of eserine. He introduced the procedure of trephining the sclerotic for the relief of glaucoma. His name however will always be associated with that condition of the pupils peculiar to syphilis and described in the Edinburgh Medical Journal in 1869. What then are the characteristics of this type of pupil about which it has been said by Adie, "is as near as may be, in our imperfect world, an infallible sign of syphilis of the nervous system"?

1. The signs are present in both eyes.
2. The pupils are small; let us define it as a pupil with a diameter not exceeding 2.5 mm. and care should be exercised if more than 3.5 mm.
3. The light reflex, direct and consensual, is absent; the pupils do not contract with increased illumination or dilate when they are shaded.
4. The contraction of the pupils on convergence-accommodation is prompt and complete; when the act of convergence ceases the pupils regain their resting size at once.
5. The response to mydriatics is slow and incomplete.
6. Useful vision is present.

In dealing with the first, Adie says "it would be rash to diagnose syphilis from unilateral signs alone. Several abnormalities that mimic the Argyll Robertson pupil closely but have nothing to do with syphilis are frequently unilateral". Commenting on the other essentials he goes on to say, "The pinpoint pupil does not exist outside text books, but the pupil under consideration is small, often very small, and care should be exercised if it is more than 3.5 mm. in diameter. Error will be avoided if the reaction on convergence is tested carefully; if the pupil is large it will probably be found that this reaction, as well as the light reflex, is defective in some respect. This at once places it outside our category, it is a "partially fixed" pupil; of this, syphilis is but one of many causes." The size of the pupils of syphilis "is constant, day in, day out, whereas the pupils in several conditions which resemble the

Argyll Robertson pupil, in that they react to accommodation but not to light, differ from it in that they vary in size from time to time and dilate when shaded." Enlarging on the fourth requirement he continues, "A prompt response of good range on convergence is essential; equally important is a prompt return to the resting size after convergence ceases. These features distinguish the pupil of syphilis from those showing tonic reactions and prevent the error of mistaking this harmless anomaly for a sign of serious disease." Coming finally to the question of vision, "The proviso that vision must be fairly good is necessary because the pupil of an eye blind from any cause may react on accommodation but not to light. This is not to say that vision may not be somewhat impaired. The commonest cause of progressive optic atrophy is tabes. Its victims are often seen in the earliest stage of the disease; there is not any ataxy and the tendon reflexes may still be brisk. In cases of this kind the diagnosis of tabes is based on the association of optic atrophy with fair vision and complete abolition of the light reflex. If optic atrophy were the only lesion, say from pressure by a tumour, and vision were still fair, the light reflex, though possibly defective, would still be present. In the first case there must be some other lesion causing loss of the light reflex, and the only disease in which the two lesions are likely to occur is tabes. Conversely, if with failing vision from optic atrophy, the light reflex persists, then tabes is unlikely. On two occasions in my experience tabes had been diagnosed and a hopeless prognosis for vision had been given because the Wassermann reaction was positive in the blood and the ankle jerks were absent. The fact that the pupils still reacted to light, although vision was grossly defective, threw doubt on the diagnosis of tabetic optic atrophy, and after further investigations a pituitary tumour was removed, with restoration of vision."

What pupil may be confused with the Argyll Robertson pupil? The neurologists, Gordon Holmes and W. F. Adie, were chiefly responsible for the isolation of the tonic pupil and the attention of the profession was first directed to this phenomenon in 1931. It is an odd condition and that it is easily confused with "the pupil peculiar to syphilis" is not to be wondered at when to a pupil that does not react to light but does to accommodation frequently has the added similarity of absent tendon reflexes.

How is this harmless—but confusing syndrome—to be recognized? The tonic pupil is seen most often in females, usually unilateral and larger than its fellow. It reacts on convergence in a peculiar way. Again quoting Adie, "at first there may be no response, but after a few seconds it contracts very slowly to a size often much smaller than the other, normal, pupil. If the patient then looks into the distance it remains small for a varying time and then dilates very slowly, taking perhaps several minutes to reach its usual resting size." Prof. Edwin Bramwell at a meeting last year (1935-36) of the Medico-Chirurgical Society of Edinburgh called attention to this benign condition, which he proposed should be called "the Holmes-Adie syndrome". He quoted a typical case seen in a woman in 1924 of whom it had been noted at the Eye Department of the Edinburgh Royal Infirmary that she had "Argyll Robertson pupils", but it was found that the blood Wassermann was negative and the cerebrospinal fluid was normal. Prof. Bramwell had made the following note: "The condition of the pupils is particularly interesting. They are both large and immobile to light but contract on convergence." The left eye on convergence slowly, in the course of 10 to 15 seconds, came down almost to pinhole size and then slowly dilated, reaching its ordinary size in a minute to a minute-and-a-half. He had never seen anything like this before. The right pupil

reacted normally on convergence and did not become nearly so small as the left.

Ankle- and knee-jerks were absent. The immobility of the pupils to light and the absent knee-jerks suggested syphilis, but three things were against this diagnosis: (1) the absence of other symptoms of tabes, (2) the negative Wassermann, (3) the large pupil with the slow contraction of the left pupil on convergence and its still slower dilation. Prof. Bramwell indexed the case, "Pupil abnormality with absent tendon-jerks", and did not commit himself to a diagnosis, but the probability of syphilis must, he says, have occurred to him, for he prescribed mercury and iodide." He believed that the syndrome is often thus taken for syphilis by those unacquainted with it, and that in former years he must have repeatedly done so.

There still seems to be room for clinical observation. Another example is that of the separation of coronary thrombosis from angina pectoris, an achievement dating back little more than ten years. Now that the two conditions are contrasted in parallel columns one wonders how they ever could have been confused and yet the distinction escaped the observations of so renowned an observer of cardiac disease as the late Sir James MacKenzie.

A pupil that reacts to accommodation and not to light is of the same diagnostic value as a headache, fever, cough, or backache. It may mean something serious or nothing at all. If it conforms to the requirements laid down by Argyll Robertson then the phenomenon is an infallible sign of syphilis, the most valuable of neurological signs and one that is as near being pathognomonic as any condition in medicine.

If a pupil reacts to accommodation and not to light it may be not only an expression of syphilis of the central nervous system but has been found in non-syphilitic congenital cerebral defects, cerebral haemorrhage and thrombosis, tumour, myelitis, arterio-sclerotic and senile dementias, internal hydrocephalus, meningitis, disseminated sclerosis, trauma, syringomyelia, progressive muscular atrophy, polio-encephalitis, encephalitis lithargica, hereditary ataxia (Friedreich's disease) chronic alcoholism, diabetes, nicotine and carbon disulphide poisoning and one is given to understand that et cetera could be added to this list ending up one presumes with the "tonic pupil", which is harmlessness itself.

The Argyll Robertson pupil is a pupil peculiar to syphilis and possesses definite characteristics. A pupil that reacts to accommodation but not to light, may be due to a number of conditions among which may be syphilis and the "tonic pupil". The latter, at first confusing but easily differentiated, is a phenomenon that begins and ends with itself—a disorder sui generis—and of no diagnostic value.

This arrangement, chiefly from the work of Adie, is presented in the year of the centenary of the birth of Argyll Robertson who contributed so richly to both ophthalmic practice and neurology.

BIBLIOGRAPHY

- Dictionary of national Biography (1901-1911), p. 215, *Oxford University Press*.
Adie, W. J.: Argyll Robertson Pupils True and False. *B.M.J.*, 1931, 2: 136.
Adie, W. J.: Some Common Ocular Symptoms, *The Practitioner* 1934, CXXXII: 529
Abs: *Transact. Med-Chir. Soc. of Edinburgh* 1935-36, 83. *The Clinical Journal* 1936, LXV: 427.

Diuretics and What They Do¹

HENRY A. CHRISTIAN, M. D.²

IF diuretics are given to patients with severe acute nephritis, in all probability they will do harm. This judgment is not based on clinical experience, since, for reasons which I shall speak about later, I have never used them in such patients, but it is based on animal experimentation carried out twenty-three years ago by myself and my associates, Drs. Dawson, O'Hare and Walker in which it was found that with a severe experimental nephritis diuretics, such as diuretin, theocin, caffeine, potassium acetate and even water, shortened the lives of the experimental animals, indicating that a diuretic threw an increased burden on the kidneys already seriously damaged. Mercurial diuretics were not used in these experiments; modern mercurial diuretics were not at that time in use.

No satisfactory evidence has ever been adduced that diuretics accomplish much more than free the body from accumulated water with its solutes, that is, from oedema, the constituents of which in themselves are not toxic. In severe acute nephritis oedema practically never is a significant cause of discomfort to the patient and so needs no therapy. In patients with acute nephritis with toxic symptoms and a very low urine output diuretics seem to be of little help, and as they may, judged from animal experiment, do harm, it seems wise not to use them in the treatment of such patients. In chronic nephritis with nitrogen retention and toxic manifestations, so-called uremia, clinical experience is that diuretics do not help, and that sometimes here they seem to do injury.

In other words, what we seek to accomplish by diuretics is to remove from the body accumulated fluid that is doing harm by its presence. Moderate oedema, for example of the ankles, is not an indication for the use of diuretics. I do not regard diuretics here as desirable for cosmetic effects. Some of the lady patients might like to have diuretics under those circumstances, but to give them probably is not good practice.

There is a very curious incompatibility between nitrogen retention and the retention of water in the form of oedema, so much so that one can be pretty safe in saying that the patient, who is toxic in this sense, will not be oedematous, unless he has circulatory failure. This point is of practical value to the practitioner who does not have access to a laboratory to determine the blood nitrogen level of his patients.

Symptoms from oedema vary very greatly, depending upon where the fluid is accumulating. Oedema of the brain may be fatal. Hydrothorax may interfere seriously with circulation and respiration. Ascites, unless excessive, is only uncomfortable. Subcutaneous oedema, unless marked, causes few symptoms.

¹ An address at the Annual Meeting of the New Hampshire Medical Society at Manchester, May 26, 1936, and reprinted from the New England Journal of Medicine at the request of one of our members.

² Christian, Henry A.—Physician-in-chief, Peter Bent Brigham Hospital, Boston.

Furthermore, oedema in different locations in the body responds differently to diuretics and particularly with regard to the speed of the disappearance of the oedema. If the oedema is causing serious symptoms, and if drug therapy will remove the oedema but slowly, one should not depend upon diuretics, but should remove the fluid mechanically to relieve the pressure. Again, obviously, it would be foolish to treat severe cerebral oedema by diuretics, because your patient would probably be dead before the diuretic drugs could get started in action, and, of course, death would end their action.

Hydrothorax, which we see so often in people with oedema, responds slowly to diuretic drugs, and on the whole, not very satisfactorily. The needle is wiser than the pill under those circumstances. I believe that hydrothorax in an oedematous patient, particularly one with circulatory difficulty, should be relieved by tapping before you leave the patient on your first visit.

Subcutaneous oedema and ascites are the profitable fields for the use of diuretic drugs. We have available a number of diuretic drugs. In fact, we have available many more than there is any necessity of the practitioner using. The doctor should use only the few with which he is familiar, and it is injudicious for him to use those whose action he does not thoroughly understand.

A good many forms of oedema do not require any diuretic drugs, because treatment of the underlying condition will clear up the oedema without the necessity of using a diuretic drug. For example, every now and then we see a patient with pernicious anemia with a marked degree of oedema. Liver therapy here will take care of the anemia in a relatively short time, and the oedema will fade away without using any diuretic drugs.

Sometimes we see ascites and hydrothorax with pericardial fluid in patients with myxoedema. In such cases thyroid gland substance will clear up the myxoedema symptoms and will also cause elimination of the fluid, and as a rule, no diuretic drug is needed when the oedema is part of a myxoedema. We have certain local oedemas which depend upon obstruction of the veins or of the lymphatics or upon local inflammatory conditions. These require treatment other than diuretic drugs and are more surgical than medical in their therapeutic aspects.

The forms of oedema, in which diuretic drugs play their chief role of effectiveness, are the forms of oedema that we call renal oedema, the so-called nephrosis syndrome, and circulatory oedema, either cardiac or hepatic. In the former, the oedema mainly is the result of disturbed osmotic relationships between blood plasma and body fluids; in the latter, the oedema results mainly from disturbances in the hydrostatic pressure relationships between circulating blood and extra-capillary pressures. No oedema, however, is so simple as to be reducible to single causative factors, and this plays an influencing part in both mechanism and management.

To remove oedema, we can proceed along two lines. We can do something to change the underlying causative factor, or we can do something to increase the excretion of the retained fluid. For example, in renal oedema, the so-called nephrosis syndrome, we can raise the osmotic tension by an injection of an acacia solution and that will bring about a diuresis. In just the same form of oedema instead of changing the osmotic tension we can increase the output of fluid by using a mercurial diuretic. By direct action on the kidney, this will increase the urine output by decreasing tubular reabsorption.

In cardiac oedema we can combat the cause of oedema by improving the circulation by the use of digitalis. Digitalis, in that sense, is a diuretic. In

renal oedema digitalis will have no effect on the fluid; it is in no sense a diuretic for these patients. In the patient with cardiac oedema, in addition to improving the circulation (and we can improve the circulation both generally and in the kidney itself by using digitalis), we can use a diuretic such as some one of the xanthine group, as diuretin or theocin, or some of the combinations of those drugs. We need to remember that some diuretics, such as those of the xanthine group, are effective when given by mouth, while others, such as the mercurials, are ineffective when given by mouth. Obviously, the difference in administration is a determining factor in the selection of the diuretic drug for a given case. By and large it is wiser to use drugs effective by mouth dosage, although sometimes it is more profitable to use drugs that work only after parenteral dosage.

In renal oedema, the so-called nephrosis syndrome, we find that the xanthine diuretics, like theocin and diuretin, are very ineffective, and it is hardly worth while to try them out in this type of patient. On the other hand, the mercurial diuretics are very markedly effective in dealing with the oedema of nephrosis. In modern times we have been slow to use the mercurial diuretics in the patient who had renal disease, because we were fearful that the toxicity of mercury to the kidney would cause increased renal damage. Gradually we have learned that these mercurial diuretics are safe to use in the type of renal disease which expresses itself clinically by the production of oedema.

We have available three mercurial diuretics that are very satisfactory. They are novasurol, salyrgan and mercupurin. Their mercury content increases in the order in which I have named them, and their toxicity decreases in the inverse order to their content in mercury. Mercupurin seems to me, of the group, preferable, but salyrgan is nearly as satisfactory. Both are definitely preferable to novasurol, both in effectiveness and in lessened toxicity.

All of the mercurials must be given parenterally, preferably intravenously, but they may be used intramuscularly, provided the drug is injected deep into the muscle tissues. Novasurol is more irritating than mercupurin or salyrgan; on the whole mercupurin is the least irritating in the muscles. The mercury constituent of mercupurin can be used also in the form of a suppository and thus given is very effective as a diuretic drug. (Since this address was given, it has been found that salyrgan, too, can be prepared so as to be effective in the form of a suppository.) It is not irritating to any appreciable extent to the rectum. It enables the physician to send his patient home with a stock of suppositories with directions how to use them, thus obviating the necessity of the physician's presence to give an injection intravenously or intramuscularly.

Like other drugs given by rectum the dose by rectum is about five times the dose given by mouth, intravenously or intramuscularly.

Acacia solutions are effective in renal oedema, but their use is cumbersome, and it is difficult to obtain acacia solutions that do not cause a reaction.

In regard to circulatory oedema, as I have already said, digitalis is effective and should be used first. The xanthine diuretics that can be given by mouth are really very effective. We have gotten out of the habit of using them, but our therapy would be more easily carried out, if we would return to their use in cardiac cases where the oedema is in excess of that satisfactorily taken care of by the digitalis. If the xanthine diuretics do not work, then one can use the mercurials in the way I have just referred to. They are very effective.

We now come to hepatic oedema, ascites, usually from cirrhosis of the liver. Diuretics of a certain type here produce very good diuresis, but they

rarely do more than prolong the interval between the necessity of tapping the abdomen. However, that is worthwhile to the patient. Consequently, in hepatic oedema try out diuretics, to see their effectiveness. As a rule, mercurial diuretics here will be more effective than the xanthine group.

In all of these three forms of oedema, urea in large doses by mouth, sixty to ninety grams per day, may cause a satisfactory diuresis, but many patients find it difficult or impossible to take urea, even if dissolved in fruit juice. It frequently causes marked nausea, often vomiting, and hence its field of usefulness is very limited.

It should be remembered in using diuretics that one may bring about too much dehydration of the body, and that as a result the patient may get into difficulty because of this. It is quite possible to have some of the tissues of the body dehydrated to the point of producing discomfort and symptoms, when other parts of the body are definitely water-logged. Too great a restriction of fluids during diuresis will do harm, and, strikingly often, a little fluid added to the intake will increase the urine output and even promote a large diuresis.

The cirrhotic patient with a belly full of fluid and with emaciated, dehydrated tissues is sometimes made worse by a diuretic drug and made better by a good drink of water or orange juice. The proper combination, or the proper amount of fluid intake, in relation to diuretic drugs should always be kept in mind.

Practically all of these diuretic drugs also remove from the body large amounts of sodium chloride. The patient with sodium chloride deficiency in the body already is in trouble. A little judicious adding of salt to the diet of the oedematous patient often will greatly improve the general clinical condition of the patient, and not infrequently a judicious sprinkling of salt on the food will increase the effectiveness of your diuretic drug.

So, in your enthusiasm for relieving the body of oedema, do not forget the discomforts and the disabilities of dehydration and deficient sodium chloride in the body.

From "The New England Journal of Medicine" October 15, 1936; pages 709-711.

LOCUM WANTED

The Secretary has had an inquiry for a locum for a period of one year; salary offered is from \$150.00 to \$200.00 a month, plus all expenses. Further information may be had on request.

LOCUM WANTED

The Secretary has had a request asking for help in securing a physician for a locality in Cape Breton. Further information may be secured at this office.

Notes from a Rambling Medico

AN Anatomy lecture at nine o'clock in the morning as the most popular feature in an excellent general course in medicine and surgery is an achievement of no little note. Mr. Jardine, of the Royal Infirmary, Edinburgh, has this to his credit. Anatomy, Physiology, Pathology, and Surgery were so cleverly interwoven that the result was a composite of rare medical values.

Another daily exercise of much interest was an exposition of some pathological subject. Sir David Wilkie, on request, gave his classical interpretation of the types of appendicitis and their significance. At the time the Surgical Experimental Laboratory was engaged in a special problem in acute intestinal obstruction.

The four weeks' summer course in medicine or surgery at the Royal Infirmary is certainly very worth while. It is considered to be the best of its kind in Britain. The ease by which the work may be reached in Edinburgh commends the place as compared with London.

* * * * *

Shades of Gower, Hughlings Jackson, Horsley and other great names in neurology seemed to be omnipresent at the old National Hospital for Neurology at Queens Square. However the quality of the teaching appeared to equal the best traditions. One is greatly intrigued at the afternoon out-patients clinics. Critchley, Riddoch, Martin, Walsh and Symonds of the Junior Visiting Staff demonstrate the thoroughness and soundness of a school where although "the time is short", yet it is ever held that "decision is difficult, experiment perilous". The Wednesday lecture-demonstration by Kinnear Wilson gives some contrast in brilliance of presentation—a bit of a show perhaps, but a clever showman.

* * * * *

Speaking of changing tradition, truly the old order changeth slowly in London. Very eminent cardiologists give their best at the National Hospital for the Heart. But one stops short in the ward walk and looks about at the patients as they lie in their beds supported only on pillows—not a Gatch bed to be seen. This hospital was well endowed and faithful to the best in treatment but posture was maintained as the responsibility of the nurse.

However changes in the mode of locomotion must inevitably make their impress on local custom. In England motor licenses are based on horsepower and are consequently very high. With level roads the necessity for power is not great, therefore the Austen and its small kindred solve the economic problem. Imagine the incongruity of top hat and frock coat!

* * * * *

A very good day was spent at Caterham, Surrey, at the large mental hospital there. All types of mental condition were represented, including many epileptics, but some of the best work for low grade mental defectives is done here. The children are graded on a basis of combined chronological and mental age. The children at our own Training School at Truro have a higher general rating. However the work being done by these low grade children in handicraft was most reassuring and reflected great credit upon the initiative

and patience of the teachers. One child, who is of a higher mentality, but who suffers from a bilateral athetosis, was doing remarkably clever work at weaving. This child's ability was accidentally discovered, in fact it was thought that it was not able to coordinate well enough to execute the simplest movements. The best feature of the institution was its hostel, where the promising older students of the training school received their last help before being placed in society. The hostel is a farm house with accomodation for about twenty boys. It is located on a corner of the hospital farm, but the inmates are not under a strict regimen. There is considerable freedom of action, the boys being trained to assume personal responsibility. Many of them take positions as house-servants, gardeners, etc. With the large local population of suburban London there are excellent opportunities for service in contrast with the scant possibilities for placement of our own boys at the Truro Training School. If the boy does not make a good adjustment in one location he is free to return to the hostel and there work out his problem of failure and then attempt a new situation. I spent an hour or more here and was struck by the interest and industry of the boys. Their case histories proved very interesting—certainly the whole project was "an adventure in understanding".

* * * * *

Two days in the fog on the Clyde was responsible for the emergence of many an old tale. This one was new to the most of us and as it has a medical flavor may be detailed. It seems that the young son of a busy business man developed a deep interest in the collection of moths. His father tried to help him, but for various reasons found his assistance unsatisfactory, whereupon he suggested that the youthful scientist should go to a nearby bookstore and secure a treatise on the moth. A few days later he interrogated the boy on his success. The reply was to the effect that the book had not given the expected help and was definitely confusing. Whereupon the book was brought and its title proved to be: *For Mothers, and Those Who Expect to be Mothers.*

M. R. E.

Physician Wanted

There is an opening for a physician in Newfoundland with the Anglo-Newfoundland Development Company—salary \$150.00 a month, with the privilege to practise. Further information may be had from this office.

Locums Wanted for a Period of One Year.

The Secretary has received a letter asking help in securing a locums for a period of one year. Further information may be secured on request.

Historical Section

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

MARGUERITE H. L. GRANT

A HISTORY of the old orphan and workhouses, which were erected in the middle of the eighteenth century, is interesting as it shows the conditions existing among the orphans and sick of the poorer inhabitants of the town, also the intolerable conditions which prevailed in 1832 finally resulting in the establishment of the Nova Scotia Hospital, Dartmouth, in 1858 and of the Victoria General Hospital, Halifax, in 1859.

After the settlement of Halifax in 1749 under the leadership of the Honourable Edward Cornwallis, one of the first public buildings was the orphan and school house which was commenced in the spring of 1750 and ready for occupancy in 1752. It was established by the Rev. Dr. Breynton of St. Paul's Church and designed especially to provide for the accommodation of orphans until fit to go as apprentices to fishermen.

This orphan house and lot were situated in the suburbs, south of the line of forts, on the border of the property of St. Matthew's Church and Government House and just north of the *old public hospital, which was also erected in 1750 on the lot which is the present site of Government House. In 1804 a bill was read to close the lane which separated the two lots. According to Col. Morse's map of 1784 the orphan house was located on the northeast corner of the block now bounded by Salter, Hollis, Bishop and Barrington Streets, directly east of St. Peter's Chapel which was erected in 1784 and now the site of the chancel of St. Mary's Cathedral. This house and the chapel were again in line with the old poor house which was situated further west, just back and east of where the First Baptist Church now stands.

Mr. Sharrock was the first teacher and Dr. Alexander Abercrombie of the public hospital was appointed surgeon. Ann Wenman was keeper of the house. Fifty orphan children were to be taken in and instructed at one time, but in 1752 records show that there were only nineteen inmates, four females above the age of sixteen, and four males and eleven females under sixteen. This was the first educational institution in Halifax. Later a German orphan house was built on the site of the Old Dutch Church which was erected in 1755 in the north suburbs, it was a small hut constructed of logs. Gollfried Jorpel was the first schoolmaster of the German children. The orphans were supported at the expense of the Crown under the direction of the Governor, who bound them out as he saw fit. After the building of the new workhouse

* Note: Old public hospital 1750-1768 for paying patients.

in 1758 orphans were placed there under the care of the overseers of the poor, while those in the orphan house continued under the Governor until the closing of the same in 1787.

In 1752 complaints were received from the Lords of the Trade at Whitehall, London, about the great expense of the orphan house as of the hospital, but Governor Hopson wrote that the school and hospital were absolutely necessary. He complained of the useless people sent over, "that in the last shipment there were over thirty emigrants landed who could not stir from the beach and in twelve days fourteen children were taken to the orphan house." In 1754, in a letter to Governor Lawrence, the Lords of the Trade stated that they approved of striking off the allowance of rum to the troops at Chignecto and applying the savings to the orphan house. For nine years, ending 1761, two hundred and seventy-five children were cared for. Mr. Sharrock was succeeded by G. M. Buchanan, but as he was an incapable manager the school suffered a period of deterioration and reports were circulated that the children were ill-treated. A new keeper, Justine Wenman, was appointed and in 1774 Governor Legge ordered an inspection of the home with plans and provisions for the better care of the orphans. In 1768 it was resolved that the orphan house and lot be granted to trustees.

The following letter was addressed to a committee recommended to carry out these plans as cheaply as possible.

"Secretary's Office,
Halifax, 21 May, 1774.

"Gentlemen:

The Governor having thought fit with the advice of the Council, that the Orphan House should be put under additional regulations and that proper persons should be appointed to form such alterations as may to you appear necessary as well in respect to the diet of the children by establishing a weekly course of what be thought proper, as their clothing and bedding and every other necessary for their support, provided allowing a sufficiency and observing a frugality, and to see the same carried into execution by purchasing and providing all necessaries and a due appropriation of them, I am therefore to acquaint you that His Excellency does hereby request that you will take this care and inspection on you: not doubting your readiness and zeal to promote and extend an establishment for such good purposes and that you will from time to time report to the Governor and Council for proceedings. I am, gentlemen,

Your most obedient humble servant
(signed) Richard Bulkeley."

William Smith
John Fenton, Esq.
Mr. John Phillips, M.D.
Mr. Thomas Budge.

In 1776 the keeper wrote that he could not carry out the agreement of Governor Legge on account of the excessive price of provisions and other necessaries. Later complaints were received about the ruinous condition of the building which was finally abandoned in 1787, when the house and grounds were advertised "to let" and an act passed to authorize the sale of the same, also the jail and slaughter house and to provide a province building on the lower parade in the centre of the town.

It appears that after this all orphans were sent to the workhouse with those under the care of the overseers of the poor and the report of the poor house in 1832 showed, "that it was now necessary to separate the orphans from

the paupers and to provide a more convenient building for the site of the orphan house". Five acres were to be set off from the Common (the plan of this Common having been laid out in 1753). In 1839 subscriptions were made for the erection of an Orphan Asylum and House of Industry conjointly.

In 1752 the population of the town was 4,249 persons and at this time there was a great deal of poverty and unemployment. At a meeting of the Council held on December 22nd of that year, it was decided that as there were so many idle and disorderly persons and servants, who through an idle life committed thefts, that as there was no punishment except sending them to prison and that as incapable of paying, they were a charge to the Government, it was suggested that a bridewell or workhouse be erected, to which such persons should be committed and employed in hard labour—"they could pick oakum and make nets for the Fishery, and in time learn to support themselves".

The justices of the peace were ordered to make plans for a bridewell in the form of a blockhouse for that purpose.

In 1754 an Act was passed for the erection of a workhouse or house of correction. A stone house built by R. Wenman on land of the Government was to be appropriated for this until a more suitable one could be erected and R. Wenman to be appointed keeper, subject to the orders of His Majesty's justices of the peace in sessions.

Mr. Wenman's house, one of the first built, was a gambrel roof building situated on Hospital Street, (probably the old name of Blowers Street), which evidently extended along the property on the northern side; it was on this street where the military and naval general hospital was located. The workhouse was on the western border of the old burial ground, later known as the Poor House Burying Ground, now Grafton Park and just off the road leading from Pleasant Street to the Common, later Workhouse Road, now Spring Garden Road, on the north side near the intersection of Doyle Street. Hospital Street of 1754 must not be confused with a later Hospital Street in the north end of the city, which probably took on the name of the old street after it became Blowers Street about 1800. In 1834 Hospital Street was that portion of Water Street which passed the Royal Naval Hospital erected in 1783, just north of the Naval Yard, now the Dockyard. Records of 1851 state that the fire-engine house No. 6 was this old workhouse, which in 1815 became a bridewell or jail. Again in a report of the Firewards on November 20th, 1857, a similar reference is seen, "Engines No. 6—Engine House—City Bridewell", which also shows that the location of the old fire-engine house was the site of the Bridewell. In June 1858 the Fire Department reported to the City Council recommending the erection of an engine-house at "Spring Gardens" and suggested a change of site. The building now used by Mr. Connolly as a book store was originally a fire-engine house, but it is uncertain whether this was the site of the old engine-house No. 6, which was the City Bridewell, as according to old plans the site of this jail appears further west nearer the First Baptist Church and the building does not conform to the original which had a gambrel roof.

In the meantime a new workhouse was erected for the poor, this old one used only until 1765 when the Council ordered that the Government should not grant any supplies to maintain it, that the keeper should shut up the same and apply to the justices for orders. It was this old gambrel roofed house which was fitted up with cells for prisoners and which by an Act in 1815 became the "Bridewell or House of Correction and Police conjointly." In

1818 an advertisement, which described the work there, appeared in a local paper and was signed by the keeper, Mr. Winton, stating that there were buskins and stout shoes for sale and other articles manufactured by the prisoners. In 1820 it was described as nothing but an old shack and was the only building on the north side of Spring Garden Road from the burial ground to "Brookside", the home of John Stayner and later Michael Dwyer. Another old jail, formerly Col. Horseman's house on site of St. Mary's Cathedral, was taken down before this, probably shortly after the Bridewell of 1815 was established; it was a military prison. At this time the jail or bridewell, the new poor house, the morgue and burying ground occupied a whole block.

In April 1837 a resolution was made that, as the Bridewell was in a dilapidated condition, it would be a waste of public money to repair it, and that as it occupied space required for the enlargement of the poor asylum, it was necessary to have another establishment for criminals. A committee was appointed to erect a Provincial Penitentiary and House of Discipline. In 1845 a petition from the Court of Sessions and the city corporation was read requesting the transfer of the prisoners to the new penitentiary erected on the North West Arm in 1842, though it was said nearly one-half of the limited number of inmates were fit subjects for the lunatic asylum and the other for the poor house. After the erection of Dorchester Penitentiary and Rockhead Prison this old jail on the North West Arm, now on Mr. Brister's property, fell into disuse. It was at this old jail where the inmates of the poor house were temporarily placed after the destruction by fire of their home in 1882.

To go back to the history of the workhouse, a bill was passed on October 12th, 1758, to establish a new asylum for the poor. Mr. Rundle, Mr. Best and Mr. Fergusson were chosen to find a place for the location of this. They suggested the ground formerly intended for a public rope-walk, but Governor Lawrence did not approve and requested them to view a lot lying south west of Mr. Saul's garden, towards the magazine. This was not considered suitable and the committee then suggested a place which was south west of His Excellency's farm (the old field back of the present Court House) and adjoining the old English burial ground. The Governor stated that although he did not want to use the property it might not be agreeable to his successor, as the plan had been designed for enlarging the farm and advised them to look for another place. They then viewed the piece of land where the Jew's burial ground was and which the Governor said might be laid out when they please. An Act was passed in 1758 to erect a stone house sixty feet long by twenty feet wide on the inside, and twelve feet high, £500 to be allotted for this. The Hon. Benjamin Green, John Collier, Charles Morris, Malachi Salter and Henry Newton were appointed to contract for this. Artificers at this time were paid one shilling and six pence and labourers six pence per diem. This new poor house was erected just back of the First Baptist Church on Spring Garden Road; it ran close to and parallel with Queen Street, then Windmill Road and extended to the site of Robinson's stables, now a garage on Doyle Street; part of this stone building is said to be that of the poor house.

The location of this lot is recorded in 1783 in the survey or general office and taken from an old allotment book of the town. The workhouse was bounded southerly by the street leading from Pleasant west into the Common (later Workhouse Street now Spring Garden Road)—200 feet; westerly by Joel Waterman's lot 255 feet; northerly by Freek Dick Hoar's field 200 feet, and easterly by the burying ground containing 1 acre and 20 rods. This burying

ground was bounded on the south by the street leading from Pleasant Street to the Common 335 feet; on the west by the workhouse and lot 255 feet; on the north by land formerly laid out to Major Hoar and Jonathan Belcher, about 2 acres.

In 1759 an Act was passed for regulating the workhouse under the direction of the overseers of the poor with the sanction of the justices of the peace, who should agree on the appointment of a master or keeper, and the following regulations relating to the sick were made: "If any person be idiots or lunatics or sick and weak—they shall be taken care of by the keeper of the house". Surgeons were to be appointed to look after the sick as at the old public hospital and the orphan house. Orphans and poor children were to be maintained. Exact charges were to be kept by the keeper and presented to the justices when requested; the expenses of said house were to be defrayed out of the surplus earnings of labour done, which, if insufficient, were to be obtained from the Treasury.

In 1760 a memorial was read from the overseers of the poor stating that no provisions were made for the relief of the poor other than their being sent to the workhouse by voluntary subscriptions, which were uncertain. An assessment of the inhabitants was ordered to raise £100 to be collected by the wardens and vestry of St. Paul's Church. About this time Dr. Reeves was chief surgeon of the workhouse and complained of difficulties in collecting salaries.

"In 1766 several sums amounting to £2,000, received by duties levied on spirituous liquors were appropriated for the workhouse, for erecting a light-house and for finishing the church and mutiny house" (St. Mather's Meeting House)—the tax was 3d per gallon—also a duty imposed on imported goods was applied to this.

In 1763 an Act was passed by which three rooms were reserved for the use of the poor to be under the direction of the overseers of the poor of Halifax, though the workhouse generally had been placed under the direction of the justices of the peace.

In 1767 it was decided to assess the inhabitants of the town "in proportion to their abilities."

An advertisement appeared in a local paper of 1773 which describes the property. It stated, "that there is a lot for sale back of the workhouse, which produces annually one and a half tons of hay and grain". The inmates were kept at work as shown by the following advertisement, which appeared in a Gazette of 1774—"This is to give notice that any number of persons, whether men, women, boys or girls, that are willing to pick oakum or spin, shall have employment, good usage, good victuals and drink, and a good warm stove-room to work and lodge in if required without confinement, by applying to the said house". John Woodin (keeper). In another advertisement of 1802 requests were made for yellow birch for making brooms and white ash for heads and handles for hay rakes, bowls and ladles.

In 1785 Dr. W. J. Almon was appointed chief surgeon to the workhouse, a position which also has been held by his son, grandson and greatgrandson. In 1786 at a meeting of the Council a report was read on the condition of the house. It was found to be in good order and managed with cleanliness, prudence and economy, except in the case of the doctors, whose charges were considered extravagant. Their amount for the year 1785 was £260 while the expenses for the establishment were £1,200.

It was then resolved that "the Commissioners should build in such place as thought convenient a small building containing four rooms, which building

should be used as a public hospital under the overseers of the poor and the justices in sessions, where sick and disabled poor could be cared for. In 1787 the committee appointed to look into the regulating of the work house requested the Government to appoint one fit person only to attend the work house as surgeon and dispensing physician.

In 1792 the overseers of the poor were prohibited from relieving any paupers not resident in the said workhouse. By an Act in 1801 the Commissioners of the poor were appointed and to them the direction and control of the Poor House, formerly termed the Workhouse, was committed, and continued so until 1846 when they were incorporated under the title of "The Commissioners of the Poor of the Town and Peninsula of Halifax"—by that name they shall have succession forever and a common seal with power to choose from among themselves their chairman, deputy chairman and other officers.

As many repairs were now necessary (1801), it was found by reliable estimates that it would be cheaper to build a new poor house than to attempt to repair the old one.

In April, 1802, "£500 was promised for erecting a building on a particular plan to be an asylum for lunatics". But as this amount was found to be insufficient, the £500 was to be granted provided the Town of Halifax would raise £1,000. However, the amount was later granted without the condition that the city raise the additional amount, and in March, 1811 a grant of £1,000 was made to the Commissioners of the Poor to make an addition to the building now occupied by the transient poor for their better accommodation and for the care of the lunatic persons from different parts of the province. This hospital, a wing on the main building, was erected in 1812 and cost £2294, 11s 10½d. It was a roughly constructed stone building white-washed on the outside; there was no cellar until 1830 when funds were requested for excavating one under the building and a new roof for the principal building of the Poor House.

In 1815 further requests were made for the institution as the Commissioners pointed out that the vast increase of sick seamen since the American War had more than doubled the number of transient poor and small-pox prevalent in 1814-15 added to the distress. Many refugee blacks were treated there, £136.14s.6d. having been paid to Dr. W. B. Almon for his attendance and medicines.

From 1824-29, 4,058 paupers were treated and the difficulties of the establishment continued. The monopoly of the Poor House Hospital by one physician and the lack of teaching facilities led to the request in April, 1832, for a separate hospital for the sick and diseased poor in Halifax and for transient paupers. This was the first petition, which, followed by the report of the Poor House in 1832 when intolerable conditions were revealed, that showed any effort on the part of the inhabitants to erect a public hospital, and this petition followed by others led to the establishment of the Nova Scotia Hospital in 1858 and the Victoria General, then the City Hospital, in 1859.

This first petition signed by several surgeons was presented to the House of Assembly in 1832 and is as follows:

"To the Honourable the Representatives of the Province of Nova Scotia in General Assembly now convened at Halifax. The petition of Edward Carritt, William Grigor, Alexander James, Samuel L. Bishop, John Stirling—

Humbly sheweth

That the establishment of Medical Schools in every country are confessedly of great advantage and importance to the health and welfare of the public.

That when properly established they are attended with little expense, and frequently make large contribution to the funds of the Institutions to which they are attached.

That, in addition to defraying their own expenses, they are essentially necessary to all persons who enter upon the study and practice of medicine. And that their proper management tends always to relieve the public from the impositions and dangerous pretensions of empirics and persons deficient in medical education.

That the public generally, as well as the medical practitioners of Halifax, at present, lie under many serious disadvantages from want of an Hospital, combined with a proper Medical School, and as the medical practitioners have no means of giving practical instruction to their pupils, parents are deterred from entering their sons as apprentices of medicine, and from this cause the profession suffers materially in the public estimation.

That the public Institutions of every country are the chief source of medical information; and that the public are always best served when Medical Schools are combined with Hospitals for the sick.

That the Poor House has now in a great measure altered its original character, and the number of the sick, and the various and important cases of disease admitted therein, demonstrate in the strongest manner the value and importance of the Poor House as a Medical Hospital.

That your Petitioners view with satisfaction the advantages to be derived from the Poor House as a public Hospital; but at the same time cannot but express their regret at the total absence of all medical instruction in the seminary, and the neglect of the resources which it presents as a medical school.

That your Petitioners are desirous of turning these resources to the best advantage, and pray that your Honourable House will adopt a new arrangement in the medical department of the Poor House, and enable your Petitioners to render it more beneficial to the public, and advantageous to the profession.

That they will attend the Poor House Hospital for an hour daily, deliver instruction to the pupils on the principles and practice of medicine and surgery, and perform all medical duties in the same manner, as performed in the Hospitals of Great Britain. And by so doing they are of opinion that many pupils will be attracted to the establishment, and by the fees collected for medical instruction, the expenses of the medical department will be greatly reduced, and ultimately defray its own expenses.

That your Petitioners look with regret upon the present medical system followed in the Poor House as a grievous monopoly; and calculated to render a public Hospital a source of private interest and convenience; and as the important medical duties of the Poor House are now so numerous, they are of opinion that no single practitioner extensively engaged in private practice can alone perform the multiplied services which are required.

That your Petitioners consider themselves and their pupils altogether excluded from the privilege of the Poor House and that their visits there can only be made by invitation of the present medical attendant and as a matter of favour.

That your Petitioners and their pupils can derive no advantage from the Poor House under its present management, and in consequence of reasons which have been already stated, pray that your Honourable House will be pleased to open its medical department to all medical practitioners, who being regularly qualified shall be disposed to give their attendance. And your Petitioners, as in duty bound, will ever pray, etc. etc."

EDWARD CARRITT

WILLIAM GRIGOR

ALEX F. JAMES

SAM'L L. BISHOP

JNO. STIRLING

The petition was considered, but before action could be taken on a separate hospital a committee was appointed with Jotham Blanchard, Chairman, to look into and report on the state of the Poor House.

This Committee stated that they had visited all the wards in the Poor House, that there were 298 persons in the establishment and every room

from cellar to garret was filled to excess and very unhealthy—there were no cross windows nor means for ventilation. In one garret over the ward for lunatics, in which was an average of twenty patients, there were 18 beds nearly in contact in which 47 persons were nightly crowded. In two or three rooms, 30 x 20 ft. were 20 beds and about twice the number of people. In one ward called the Hospital, there were 18 men and 2 boys, most of them confined to bed.

The total absence of all classification of diseases was one of the distressing circumstances; some were dying of mere old age, others of consumption, some were labouring under general debility, and others with local ailments, often resulting in serious consequences—one man came in to be cured of an ulcer and caught typhus fever. A separate hospital was necessary to preserve the healthy from contagion. The Committee felt also that the present buildings were meant only for the indigent and aged, but now served as a general hospital, a lunatic asylum, an orphan's house, a sailors' hospital and a lying-in institution. There was an average of 800 persons with 100 deaths a year, and should cholera break out it would sweep away the inmates.

There was absence of comfort and cleanliness, and so over-crowded that it was impossible to provide bathing facilities.

The Committee felt that one institution might serve all purposes of a general hospital, a sailors' hospital, a lunatic asylum and a lying-in institution, that it would not fall entirely on the public as persons willing to pay for accommodation could be admitted and private contributions would be made, and it was stated that as usual the ladies took the lead.

They also requested that the Act for establishing an orphan house passed in last session be carried out—there were now 74 children, all orphans except 9, under 10 years of age; many were forced to sleep with adults, male and female, without any regard to fitness of health or morals. An additional reason for the hospital would be the free admission of the medical men into the wards of the Poor House, and except for one apothecary the public would have medical attendance free. The need also for a medical school connected with it was urged, but until a hospital was established the Committee felt the medical men and their students should be admitted.

Again in 1834 the need of a hospital was felt as it was necessary to use the Lunatic Asylum of the Poor House for a cholera hospital during the epidemic. The victims were buried in the Poor House Burying Grounds. This poor house cemetery had been a standing nuisance for some time, as well as a bone of contention between the wardens and vestry of St. Paul's Church and the Commissioners of the Poor. Shortly before 1835 the fence was found to be in bad repair and was replaced by a substantial stone wall which was furnished by grants from the Legislature to the Commissioners for the maintenance of the poor. It was a measure imperatively demanded by the state of that place of interment, which had threatened to become the seat of dangerous infection, as the bodies of the cholera victims of 1834 were badly interred and there was no proper drainage. It was said this stigma prevented the locality from becoming a residential one.

In 1843 a petition was sent to the House by the Commissioners of the Poor requesting a grant for aid for the improvement and enlargement of the Poor House as some of the paupers had to be accommodated in the building used for the insane. They pointed out that although the "lunatic house" had been enlarged a few years ago at the expense of the town, yet on account of the increasing number of inmates "it was becoming too confined for their

comfortable accommodation". They stated that the building was constructed of stone with one wing and that there was a small wooden building in the rear of it which was partly occupied as a wash-house and which was both uncomfortable and unsuitable for that purpose. They requested an additional wing to the central building which would afford them room for the insane as well as for the sane paupers, and they estimated that the cost would be almost seven hundred pounds.

In the meantime petitions were made for a separate hospital for the insane or for a united hospital. Finally, after further discussions and requests it was decided to build separate hospitals and a new poor house.

(To be Continued)

The W. C. B. Commission Report

This is indeed a fearful, wonderful and curious document. After reading it one wonders how the poor unfortunate laborer, the benevolent employer, the grasping doctor, and the incapable Board itself, managed to get along for so many years, under all the handicaps and weaknesses of the Act? How were they permitted to carry on business with such imperfect machinery?

When the meetings were being held, we heard of many matters that the doctors felt might be bettered, but the Report makes little mention of them, although the Medical Society was before the Board with their statement.

On the contrary the Report almost seems to go out of its way to rap the medical profession in this Province. The press of both political parties give prominence to this summing up of the medical side of the question.

"Many instances have come to the attention of the Commission that medical practitioners have made claims on the Board for services not actually rendered, and in cases have furnished the Board with false accounts. The Board should take proceedings of a criminal nature, and if examples were made, they would have a deterrent effect. We regret having to make this statement, but in view of the strong representations made on this matter, we have no other alternative."

And to think that the iconoclastic member of our Medical Society has signed this report!

What are you going to do about it?

S. L. WALKER, M. D.

Infant Death Rates

The death rate of Canadian infants has been decreasing in the past few years, but there are still 35 out of every 1,000 babies born who die before they are one month old and as many more before one year. The British Isles, the Scandinavian countries, Holland, Switzerland, New Zealand, and Australia all have better records than that. New Zealand has the best average, losing only one-half as many babies as we do. Scientific knowledge distributed to mothers has done much to cut down the infantile death rate, but much has yet to be done.—*Berwick Register*.

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and the Secretaries of Local Societies

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.

VOL. XV.

MAY, 1937

No. 5

THE hospital is the doctor's workshop. In it he practices and develops his art. If a hospital staff is progressive, so is the hospital and, unfortunately, the converse holds true as well. The old English proverb,

"A woman, a dog, and a walnut tree,
The more you whip them the better they be",

applies alike to hospitals and the doctors who work in them. Each must seek to stimulate the other, urging always forward.

These are facts now well recognized, and it rather surprises us when we realize how recently we have recognized them as such. At the turn of the Century a small group, less than a dozen, of hospital Superintendents met to form the nucleus of what was later to become the American Hospital Association. As this organization developed it embraced a yearly greater number of those interested in managing hospitals. For the Physician there was no place to express his views on hospitals and their management. If he went to a Medical meeting he usually left his hospital worries behind him; if he was the host to a group of visiting clinicians at his hospital he put his best face on and securely locked up any family skeletons. In his hospital relationships he was a bit inclined to look upon the management as a potential source of war at any moment. Frequently he regarded his confrere in the same light or with greater virulence. Those were the days when some men stealthily consulted the codes of Medical Ethics frequently, to keep just within the law themselves or catch an unwary brother sneaking beyond the pale. A consultation was very formal, very fearful to the patient, and accompanied by much covert sparring. It was an age when the majority of doctors kept indifferent case records if any at all. The laboratory was still rather despised as a source of useful information while the x-ray apparatus in use gave results which were of more entertaining than diagnostic value.

The situation today is quite different. Many factors played a part including the development of invention, but the two chief ones were the Great War followed by the Standardization of Hospitals by the American College of Surgeons. The War prepared the way by demonstrating beyond question the value of co-operation in Medical and hospital services; the necessity for well kept records; the usefulness of good laboratory and x-ray services, and showed

without doubt; the present and future possibilities of good surgery. But most important of all, it seized Medical men from a "starved shirt" routine, hurled them together into a tremendous emotional turmoil where superficialities lost their values and accomplishment became preeminent. These physicians who returned to Canada and the United States following this experience wanted only the proper Gospel. Had it not been forthcoming in a few years the old order might have returned but with the remarkable foresight which has since its foundation guided the destinies of the American College of Surgeons, the required Gospel was ready.

It had been based upon a study of hospitals, mainly large hospitals. It was called, "The Minimum Standard for Approval of Hospitals of the American College of Surgeons". Here it is:

I

"That physicians and surgeons privileged to practice in the hospital be organized as a definite group or staff. Such organization has nothing to do with the question as to whether the hospital is "open" or "closed", nor need it affect the various existing types of staff organization. The word STAFF is here defined as the group of doctors who practice in the hospital inclusive of all groups, such as the "regular staff", the "visiting staff", and the "associate staff".

II.

"That membership upon the staff be restricted to physicians and surgeons who are (a) full graduates in medicine in good standing and legally licensed to practice in their respective states or provinces, (b) competent in their respective fields, and (c) worthy in character and in matters of professional ethics; that in this latter connection the practice of the division of fees, under any guise whatsoever, be prohibited."

III.

"That the staff initiate and, with the approval of the governing board of the hospital, adopt rules, regulations, and policies governing the professional work of the hospital; that these rules, regulations, and policies specifically provide (a) that staff meetings be held at least one each month, in large hospitals the departments may choose to meet separately; (b) that the staff review and analyse at regular intervals their clinical experience in the various departments of the hospital, such as medicine, surgery, obstetrics, and the other specialties; the clinical records of patients, free and pay, to be the basis for such review and analyses."

IV.

"That accurate and complete records be written for all patients and filed in an accessible manner in the hospital—a complete case record being one which includes identification data; complaint; personal and family history; history of present illness; physical examination; special examinations, such as consultations, clinical laboratory, X-ray, and other examinations; provisional or working diagnosis; medical or surgical treatment; gross and microscopical pathological findings; progress notes; final diagnosis; condition on discharge; follow-up and, in case of death, autopsy findings."

V.

"That diagnostic and therapeutic facilities under competent supervision be available for the study, diagnosis, and treatment of patients, these to include, at least (a) a clinical laboratory providing chemical, bacteriological, serological and pathological services; (b) an X-ray department providing radiographic and fluoroscopic services."

This hall mark of its approval was at first extended to only a few found worthy. But the fire caught and before a tornado of enthusiasm gained ground. There was a standard at last! A standard depending upon honest

work and achievement! Dollars and cents played a very minor part. Like Salvation it was free, but it cost a lot of hard work and then more hard work. It would have achieved success in any case, but its remarkable adoption and support by thousands of hospitals in the Eastern as well as in the Western Hemisphere was and is largely due to the ability and personality of Doctor Malcolm T. MacEachern, Director of Hospital Activities as well as Associate Director of the American College of Surgeons. Real Hielan' blood, a Canadian birth, Presbyterian upbringing and graduation from Old McGill gave him his start. He is known from the Arctic Circle to the Equator; once he meets you he knows you forever. Come to the College Meeting in Halifax on May 20th and 21st and meet the Spirit of Good Hospitals in the Flesh.

H. L. S.

Statement Regarding Fees

BELOW is given a statement showing our standing with the Canadian Medical Association in connection with the conjoint fee for this year.

Number of doctors subscribing to the conjoint fee, 1936-37....	288
Number of doctors deceased.....	3
	<hr/>
	285

Number of doctors who paid the \$15.00 fee.....	250
Number of doctors who have not paid the conjoint fee	35
	<hr/>
	285

285

Those who have not so far paid the conjoint fee are requested to do so as soon as convenient. Two hundred and eighty-five of our members are now receiving the journal of The Canadian Medical Association and the treasurer would like to send on the balance owing them as soon as possible.

Secretary.

Provisional Programme

Morning Clinics, American College of Surgeons

Halifax, N. S., May 20th and 21st, Halifax, N. S.

VICTORIA GENERAL HOSPITAL

May 20th, Thursday.

	Surgeon	Nature of Clinic	Room	Capacity
8.30 A.M.	Dr. H. K. MacDonald	Operative Clinic Thorocoplasty, 2 cases.	A.	7
10.15 A.M.	Dr. C. E. Kinley	Operative Clinic. General Surgery.	A.	7
8.30 A.M.	Dr. W. A. Curry	Operative Clinic. General Surgery.	B.	7
10.15 A.M.	Dr. N. H. Gosse	Operative Clinic. General Surgery.	B.	7
8.30-12.00	Dr. H. B. Atlee	Operative Clinic. Gynaecological Cases.	C.	7
9.00-10.15 A.M.	Chairman, Dr. N. H. Gosse	Cancer Clinic.	Clinic Room	60
10.15-12.00	Chairman, Dr. H. K. MacDonald	A full variety of cancer cases will be shown by the Fellows of the College.	Clinic Room	60

Visiting Surgeon, Dr. F. H. Lahey.

May 21st, Friday.

8.30 A.M.	Dr. C. E. Kinley	Operative Clinic. General Surgery.	A.	7
10.15 A.M.	Dr. H. K. MacDonald	Operative Clinic.	A.	7
8.30 A.M.	Dr. N. H. Gosse	Operative Clinic. General Surgery.	B.	7
10.15 A.M.	Dr. W. A. Curry	Operative Clinic. General Surgery.	B.	7
8.30-12.00	Dr. Frank G. Mack	Operative Clinic. Urological Cases.	C.	7
9.00-10.15 A.M.	Chairman, Dr. C. S. Morton.	Cancer Clinic.	Clinic Room	60
10.15-12.00	Chairman, Dr. C. E. Kinley.	A full variety of cancer cases will be shown by the Fellows of the College.	Clinic Room	60

Visiting Surgeon, Dr. F. H. Lahey

GRACE MATERNITY HOSPITAL

May 20th, Thursday.

9.00 A.M.	Dr. C. S. Morton Dr. P. A. Macdonald	Obstetrics Clinic. Practical Demonstration.	Clinic.	25
7.00 A.M.	Dr. C. S. Morton Dr. P. A. Macdonald Dr. E. K. Maclellan Dr. H. B. Atlee	Pre Natal Clinic.	Clinic.	25

HALIFAX INFIRMARY

May 20th, Thursday.

	Surgeon	Nature of Clinic	Room	Capacity
8.30 A.M.	Dr. J. G. MacDougall	Operative Clinic. General Surgery.	A.	7
	Dr. H. D. O'Brien			
10.15 A.M.	Dr. J. V. Graham	Operative Clinic. General Surgery.	A.	7
	Dr. H. D. O'Brien			
8.30 A.M.	Dr. A. E. Doull and associates.	Operative and Non Operative Clinic.	B.	7
9.00-12.00	Chairman, Dr. G. H. Murphy.	Fracture Clinic. A full variety of cases will be presented by the Fellows of the College.	Clinic.	60
	Dr. J. V. Graham.			

Visiting Surgeon, Dr. F. W. Bancroft.

May 21st, Friday.

8.30 A.M.	Dr. J. V. Graham	Operative Clinic. General Surgery.	A.	7
	Dr. H. D. O'Brien			
10.15 A.M.	Dr. J. MacDougall	Operative Clinic. General Surgery.	A.	7
	Dr. H. D. O'Brien			
8.30-12.00	Dr. C. S. Morton	Operative Clinic. General Surgery.	B.	7
	Dr. G. H. Murphy			
	Dr. D. J. Macdonald			
9.00-10.15	Chairman, Dr. J. G. MacDougall	Fracture Clinic.	Clinic Room	60
10.15-12.00	Chairman, Dr. D. J. Macdonald	A full variety of cases will be presented by the Fellows of the College.		

Visiting Surgeon, Dr. F. W. Bancroft.

CHILDREN'S HOSPITAL

May 20th, Thursday.

8.30 A.M.	Dr. T. B. Acker	Non Operative Orthopaedic Cases.	Clinic.	25
-12.00	Dr. O. Weatherbe	Operative Clinic. General Surgery, Children.	1	10
	Dr. P. A. Macdonald			

May 21st, Friday.

8.30 A.M.	Dr. T. B. Acker	Operative Clinic. Orthopaedic.	1	10
-12.00	Dr. P. Weatherbe			

May 20th, Thursday.

8.30 A.M.	Dr. T. B. Acker	Non Operative Orthopaedic Cases.	Clinic.	25
-12.00	Dr. P. Weatherbe	Operative Clinic. General Surgery, children.	1	10
	Dr. P. A. Macdonald			

May 21st, Friday.

8.30 A.M.	Dr. T. B. Acker	Operative Clinic. Orthopaedic.	1	10
	Dr. P. Weatherbe			
	Dr. P. A. Macdonald	Operative Clinic. General Surgery, children.	1	10

CASE REPORTS

Case Reports From The Halifax City Tuberculosis Hospital, Halifax, N. S.

The following case reports were presented to the meeting of the Halifax branch of the Nova Scotia Medical Society March 10th, 1937. These cases were grouped as follows:—

1. Extra-pleural thoracoplastic operations.

- (a) A successful result.
- (b) An unsuccessful result.
- (c) A suitable case for this operation.

2. Operations on the phrenic nerve.

- (a) Crushing and freezing.
- (b) Removal or exaeresis.

3. Intrapleural pneumolysis.

- (a) Simple cauterization and division of adhesion over cavity.
- (b) Cauterization without complete separation of vascular adhesion.
- (c) Cold cautery dissection.

The operative work in all these cases was performed by Dr. H. K. MacDonald and Dr. V. O. Mader. The remarks noted in each of the cases presented were made by these surgeons.

SECTION ON THORACOPLASTIC OPERATION

Case No. 1.

History. Male. Single. Age: 21 years. Occupation: steward.

December 10th, 1932—Admitted to Tuberculosis Hospital. The patient has lost about fifty pounds in weight in the past two years; has a cough and expectoration; sputum positive for tubercle bacilli.

Diagnosis on admission: Moderately advanced pulmonary tuberculosis involving the upper lobe of the right lung with a minimal infiltration in the left apex.

Blood picture satisfactory. Disease was found to be progressing in the right upper lobe with the formation of a small cavity.

Artificial pneumothorax was decided on and begun in December, 1933. Penumothorax was incomplete and inefficient as the cavity was not obliterated and the sputum continued to be positive.

Thoracoplasty was next considered.

June 17th., 1935: Patient was admitted to the V. G. Hospital.

June 20th., 1935: 1st, 2nd. and 3rd. rib removed.

July 8th., 1935: 4th. and 5th. rib removed.

July 29th., 1935: 6th and 7th. rib removed.

January 1936: Sputum became negative; finally disappeared completely.
June 1936. Patient is perfectly well and is now teaching school.

Remarks: In this case a partial upper thoracoplasty with complete removal of the first seven ribs was carried out because the lower lobe was apparently healthy and there was a minimal lesion in the upper lobe of the opposite side. For the same reason no phrenicectomy was performed. The wisdom of this procedure is demonstrated by the fact that this patient now has a functioning lower lobe while the upper lobe is completely collapsed.

The anaesthesia used was Paravertebral novocaine block while Evipal was given during the process of cutting the ribs. This type of anaesthesia we have found most satisfactory in our cases.

Case No. 2.

History. Female. Age: 18 years.

January 29th., 1934—Admitted to Tuberculosis Hospital. Illness is only of five months' duration. This patient was subject to large haemoptyses on various occasions.

Diagnosis: Far advanced pulmonary tuberculosis involving the whole of the left lung. The disease was clinically active; the temperature ranging on an average up to 100° F and pulse rate frequently elevated as high as 112. Artificial pneumothorax could not be established because of pleural adhesions. After five months rest in bed the temperature came down to normal. Pulse rate was still elevated to 100 and a little over. In August 1935 it was decided that the patient was now fit for surgical treatment. The pulse rate was now in the low nineties. This was considered to be due to mechanical factors as the heart was markedly displaced into the left thoracic cavity the result of a condition of atelectasis involving the left lung.

August 26th., 1935—Patient was admitted to V. G. Hospital.

September 3rd., 1935—1st., 2nd., and 3rd ribs were resected.

September 23rd., 1935—4th., 5th and 6th. ribs were resected.

September 28th., 1935—Patient expired—cardiac failure being cause of death.

Remarks—The patient did exceedingly well after her first stage thoracoplasty. It was then with very little hesitation that we proceeded with the second stage. Following this operation at which three ribs were resected there was a great increase in pulse rate and the patient's condition became alarming. We felt that this was due to mediastinal flutter. Looking back on this case one feels that it would have been wiser if two instead of three ribs had been resected.

This case was presented to show that it is absolutely essential that a most thorough study and investigation be carried out on each case coming up for a thoracoplastic operation. We believe that a study of the venous pressures in this case may have contraindicated operative procedure.

Case No. 3.

History. Male. Married. Age: 31 years. Occupation: Salesman.

May 2nd., 1934—Admitted to Tuberculosis Hospital.

He gave a history of having severe haemoptyses.

Diagnosis: Far advanced pulmonary tuberculosis, clinically active; far advanced lesion in the right lung and a moderately sized lesion in the left.

Temperature was elevated daily to 100° F and pulse to 96. Haemoglobin 65%; W.B.C. 16,800 and differential picture was of the septic type. Haemoptysis on four occasions since admission.

Artificial pneumothorax—unsuccessful.

General improvement took place with a healing of the lesion in the left lung. There are signs on x-ray examination of nature's own attempts of collapse of the right lung as can be readily seen by the pulling up of the diaphragm, the retraction of heart and trachea into the right side and of the retraction of the thoracic wall—all this to close up the right lung.

The case was brought up for possible surgical treatment. It was decided first to do a phrenic nerve evulsion—(performed January 26th., 1936). Very good results followed.

July 20th., 1936. Patient was allowed to go home for further convalescence with the recommendation that he return for a thoracoplastic operation.

Present condition:

Sputum is present and positive for tubercle bacilli.

Physical signs unchanged in the right lung and no rales now in the left lung.

Exercise: 1½ hours walk twice daily without elevation of temperature or pulse rate.

Haemogram:	Haemoglobin	100%
March 10th., 1937.	W.B.C.....	8,100

Differential:

Polymorphs	58%
Lymphocytes.....	39%
Eosinophiles.....	0
Monocytes.....	3%
Basophiles	0

March 8th., 1937.

Venous pressure: 110 mm water pressure in right arm and 120 mm in left.

Blood sedimentation rate very slightly below normal.

Vital capacity 60%.

Remarks. This case should come up for operation as his general condition is very good. The right lung is potentially of great danger to him and he is an open case of tuberculosis. He has already responded well to phrenicectomy.

SECTION ON PHRENIC NERVE OPERATION

Case No. 4.

History. Female. Age: 16 years.

February 22nd., 1936—Admitted to Tuberculosis Hospital. History shows that she has not been well for six months; has cough and expectoration; sputum positive for tubercle bacilli.

Diagnosis: Moderately advanced pulmonary tuberculosis, clinically active; temperature being elevated to 99.8° and pulse rate to 108. The lesion involves the right upper lobe and is of the exudative type. There is also a minimal infiltration in the left lung. The blood picture on admission:

Haemoglobin 76% W.B.C. 14,900; Differential picture decidedly septic in type. Patient was a very frequent bleeder.

Attempted artificial pneumothorax failed. It was felt that some collapse of the right lung should be obtained, and a temporary paralysis of the right diaphragm was decided upon.

July 17th., 1936—Right phrenic nerve was operated upon. It was crushed and also frozen with ethyl chloride. A very satisfactory paralysis of the right diaphragm was obtained. Observations were made periodically with the fluoroscope and the diaphragm remained in a paralyzed state until December 1936. This paralysis lasted over a period of five months. In the meantime, temperature assumed a normal level about August 28th., as also did the pulse rate and both have remained normal since. The general condition of the patient improved quite markedly. The sputum became negative. March 10th., 1937—patient is now fit and well enough to be discharged.

Remarks: A temporary phrenic paralysis was decided upon in this case for the following reasons:—

1st.—There was a soft exudative lesion in the right upper lobe but also a minimal lesion in the left upper lobe. In discussing the case we felt that if improvement should occur as a result of the operation that it might become necessary to carry out a similar procedure on the left side if progression of the lesion should occur.

2nd.—It was further felt that if the paralysis of the diaphragm produced no improvement within a short period of time, return of diaphragmatic function would leave the patient at least no worse off than she had been before.

Case No. 5.

History. Male. Age: 17 years.

August 26th., 1935—Admitted to Tuberculosis Hospital. History shows that in 1928 a diagnosis was made of a moderately advanced bronchiectasis in the left lower lobe. No tubercle bacilli were found in the sputum at that time. In August 1935 sputum was positive for tubercle bacilli. The lesion was found to be still limited to the left lower lobe. It was decided that this part of the lung needed collapse therapy.

Artificial pneumothorax could not be established. Case came up for surgical consideration and it was decided that a permanent paralysis of the diaphragm should be brought about.

January 26th., 1936—Phrenicectomy was performed. Remarkable improvement followed this operation. The general condition of the patient began to improve immediately afterwards and he gained a total of 23 pounds in weight. The cough and expectoration became reduced in quantity and the sputum became mucoid having lost its purulent element.

Lipiodol was injected into the left lower lobe at a later date just to find out how much dilatation there was of the terminal bronchi in the left lower lobe. X-ray film shows definite evidence of bronchiectatic dilatation in the left lower lobe which is now considered to be a tuberculous bronchiectasis. The right lower lobe is normal as shown by the lipiodol.

Remarks. About 27.5 cm of the phrenic nerve was evulsed at this operation. Fluoroscopic observations of the left diaphragm showed that it took a considerable time before permanent elevation of the diaphragm had occurred. As a matter of fact at an examination a week after the operation no elevation of the diaphragm was shown. On the fifteenth day there was only slight

elevation. There is now 7 cm. elevation of the diaphragm. Although considerable improvement had taken place the cough and expectoration had not completely disappeared. The sputum, however, has become negative for tubercle bacilli. We must keep in mind the possibility of a thoracoplasty—partial or complete—for this case.

Case No. 6.

This case is presented to show the effect of phrenicectomy on a right upper lobe lesion in which a good sized cavity was apparently closed up as a result of this procedure. This was an inefficient partial pneumothorax with a distressing cough. Remarkable improvement followed this simple operative procedure. The successful result in this case is due chiefly to release of pressures.

SECTION ON PNEUMOLYSIS OPERATION

Case No. 7.

History. Female. Age 18 years.

May 13th., 1936—Admitted to Tuberculosis Hospital. History of large haemoptysis just before admission.

Diagnosis: Moderately advanced pulmonary tuberculosis involving the left lung, with cough and expectoration and sputum positive for tubercle bacilli. Decided that collapse therapy should be instituted as soon as possible.

May 30th., 1936—Artificial pneumothorax was begun. Definite improvement followed this form of treatment. However, there was still expectoration and the collapsed lung was found to be held out by an adhesion at the apex. The case was brought up for surgical consideration and it was felt that if the apex could be freed that the increased collapse of the upper lobe would allow the sputum to disappear.

October 29th., 1936—Pneumolysis was performed. Two cord-like adhesions were found attached to the mediastinal surface at the extreme apex. Both of these were severed with most satisfactory end results. Sputum has completely disappeared.

January 28th., 1937—Patient was discharged with instructions to return for refills at intervals of fourteen days.

Remarks: These adhesions were in a very difficult place for operation. The second adhesion was found only after the first one was severed. Very often these adhesions that are attached to the mediastinal aspect are found to be attached all the way from the apex to the root of the lung.

The anaesthetic used in this case was Avertin with a very small quantity of chloroform.

Case No. 8.

History. Female. Single. Age: 16 years. Occupation: Domestic servant.

January 4th., 1936—Admitted to Tuberculosis Hospital. History of undue tiredness; loss of weight; cough and expectoration for the past four months.

Diagnosis: Far advanced pulmonary tuberculosis involving the right lung. There was fever up to 101° F. and elevation of pulse rate. Cough and expectoration with positive sputum.

February 1st., 1936—Artificial pneumothorax begun. Collapse of upper lobe unsatisfactory owing to the presence of adhesions which were preventing the

closing up of a small cavity. This case was brought up for question of surgical interference with the object of severing apical adhesions.

July 21st., 1936—Pneumolysis was performed. Two adhesions were severed by cautery. There was one other large adhesion which was considered at the time to be too vascular and it was treated with low current cautery in the vicinity of its attachment to the chest wall.

November 2nd., 1936—X-ray examination shows cavity to be completely closed and that part of the treated adhesion has separated from the chest wall. An excellent result has been obtained in this case. There has been no sputum whatever now since August 1936.

January 26th., 1937—Patient discharged and is now ready for work. Pneumothorax refills are given at intervals of about 35 days.

Remarks. This case demonstrates the wisdom of low current cauterization at the base of an adhesion which is impossible to sever entirely on account of its vascularity. Although in this case several adhesions were completely severed, the successful result could not have been obtained without eventual separation of the large adhesion which was simply cauterized about the base and separated itself at a later date. The result was most spectacular.

Case No. 9.

History. Male. Married. Age: 32 years. Occupation: Furrier.

Undue fatigue; slight cough and expectoration of positive sputum of several months' duration.

Diagnosis: Far advanced pulmonary tuberculosis involving the left lung with a minimal lesion fairly well organized in the right lung. In view of the positive sputum and the presence of a small cavity in the left lung it was decided that the left lung should be collapsed.

July 23rd., 1935—Artificial pneumothorax was begun the general condition of the patient improved from then on. Cough and expectoration, however, persisted to a lesser extent and the sputum was still positive at the end of one year of pneumothorax treatment. The question of further collapse of the lung was considered and it was felt that pneumolysis could not be done in this case because of the type of adhesions. Thoracoplastic operation was recommended. It was decided, however, by ourselves to do a thoracoscopic examination and take a look around. On November 23rd., 1936, patient was given a general anaesthesia—Avertin and a little chloroform—and a pneumolysis was done on some of the adhesions. Definite improvement followed this operation. The sputum disappeared. The degree of collapse has been very definitely increased and the intervals between pneumothorax refills have been materially increased. Another stage of pneumolysis is to be undertaken in the near future. The technique will, of necessity, be the same as at the first stage. This patient has been spared a serious thoracoplastic operation.

Remarks. With regard to this operation some small short string-like and cord-like adhesions were found which were readily severed by the cautery. There was one very dense and short adhesion, however, which needed separation from the chest wall and this was dissected away from the chest wall by reflecting with a low current cautery the costal pleura that formed the base of this adhesion. This process required the greater part of two hours' work. The base of this adhesion covered an area of about the size of 5 cm x 2 cm.

Case No. 10

This case in many respects is the same as case No. 8. A very large adhesion holding out a cavity was to be severed. The thoracoscopic examination showed this adhesion to be too vascular. The two main surfaces were then touched up with the cautery and the adhesion was not severed. At the end of three months this large adhesion separated thereby giving an excellent collapse of the lung and complete closure of the cavity.

Case No. 11.

This was a simple case of pneumolysis. One very large adhesion presented itself for operation. This case is shown, however, to point out the problem of bleeding that may complicate this operation. A very large artery was opened into and considerable difficulty was experienced in getting the bleeding under control.

Remarks. During the course of this operation a large vessel, which appeared to be the intercostal artery, was cut across. The vessel spurted directly out into the pleural cavity. The cold cautery was placed over the vessel and pressure applied for five minutes by the watch. When it was removed the bleeding commenced again. The cautery was again placed against the vessel and moderately heated. This appeared to stop the bleeding, but on removal of the cautery further oozing occurred. This process was carried out repeatedly until eventually the bleeding was stopped. The whole process took considerable time—probably half an hour. X-ray examination following this showed that the amount of blood in the pleural cavity was very small. This case showed that even severe haemorrhages can be controlled if one is sufficiently patient.

Case No. 12.

This is a case of chronic empyema in the right side in a case of tuberculous pyo-pneumothorax. Study of the venous pressures show a marked disparity between the two arms. The readings were taken on two different occasions. In the right arm the readings were 136 and 146 mm and in the left 47 and 54 mm water pressure. There is evidently interference with the venous return on the right side of the mediastinum.

T. M. SIENIEWICZ.

Advanced Nutritional Anaemia

B. S. age 14 months, was admitted to the Paediatric Clinic at the Dalhousie Public Health Clinic on July 6th, 1936.

The complaint was that the child did not eat, slept very poorly, was very irritable, cried a great deal and was very irregular with her bowel movements. Her family history was negative. She was a full term infant with a normal obstetrical history.

Feeding History. She was breast fed for five months, and then weaned because the mother thought she had not enough milk for the baby. She was then placed on cow's milk formula which the baby took indifferently. This was gradually strengthened, until, at present, the baby is taking full strength cow's milk. She was offered cereal at various times since about nine months of age, but as the baby didn't seem very anxious for this, it was never forced. The baby has had nothing else to eat.

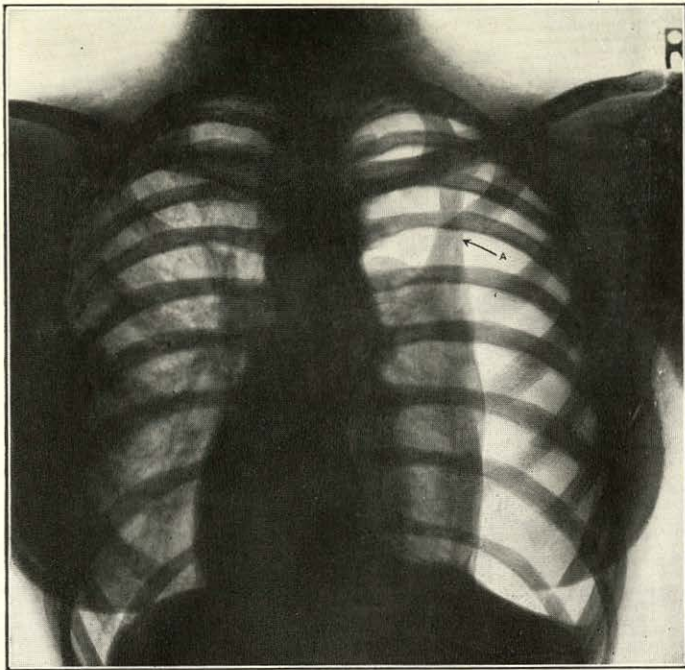


PLATE 1.

This is a case of artificial pneumothorax in which a heavy and dense adhesion can be seen running up from the upper lobe to the apex of the thoracic cage. It is marked with the arrow A.

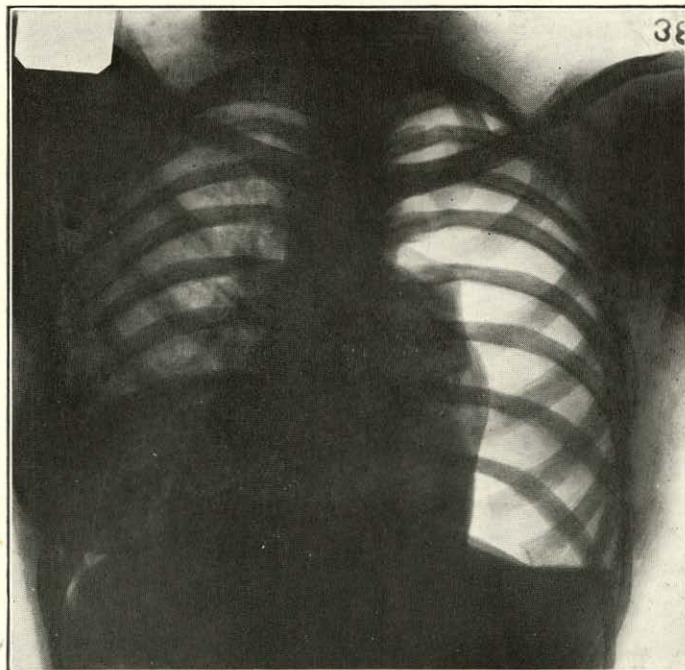


PLATE 2.

This plate shows the same case with adhesion severed by an intrapleural pneumolysis.

Past History revealed repeated upper respiratory infections, but no other illnesses.

Present Condition. According to the mother she began to notice the lack of appetite, irritability, restlessness, etc., about January, 1936, since which time it has become progressively worse. At present the child does not eat anything, except her milk, and at times seems to dislike this. It has been offered to her at all hours of the day and night. For the last two or three months the mother has had to stay up with the infant most of the night. As soon as she is put down she begins to whine and cry. According to the Mother, "Nothing I do for her seems to satisfy her."

The bowels have been very irregular for the past six months, usually on the constipated side requiring enemas. For the past week the baby has had some diarrhoea, about two to four stools a day. Vomiting of food has been a frequent accompaniment for the past six months.

Examination revealed an extremely, pale infant with a yellowish tint to her skin. She looked chronically ill and very miserable. The infant kept up a continual whine during the whole examination. Tissue turgor and elasticity poor. Muscles soft and subcutaneous tissue flabby; joint and muscles were hypotonic.

The heart showed slight dilation; the sounds were of fairly good quality, and there was a definite fairly loud blowing systolic murmur at the apex and transmitted slightly towards the base.

Apart from this the examination was essentially negative. No evidence of any infection could be found. Urinalysis was negative.

A blood count and smear were done and a diagnosis of advanced nutritional anaemia was made.

Treatment. The child was given the following prescription—Ferrous sulphate (Exicc.) gr. 2; thin glucose syrup, dr. 1, sig. t.i.d.p.c.

The Mother was advised to feed the baby strictly three times a day only and to reduce the amount of milk given. Milk was not to be given if the baby had not first taken some solid food. She was given a generally mixed diet with accentuation on the iron containing foods, e.g. egg yolk.

Blood Pictures.

	July 6, 1936	July 27, 1936	Aug. 17, 1936	Sept. 28, 1936
Haemoglobin.....	12% (Dare)	65% (Dare)	80%	99%
Red Blood Count.....	0,990,000	4,160,000	4,750,000	5,250,000
White Blood Count.....	8,160	9,800	9,200	8,400
Polymorphs.....	29%	40%	44%	48%
Lymphocytes.....	67%	51%	50%	49%
Mononuclears.....	4%	8%	5%	3%
Basophiles.....	0%	1%	1%	0%
Eosinophiles.....	0%	0%	0%	0%
Weight 9 a.m.....	20½ lbs.	22 lbs.	24 lbs.	27 lbs.

July 27th. The difference in the appearance of the child was indeed striking. She was already an entirely different appearing child. Her colour was greatly improved, her cheeks definitely showing a pinkish tinge. She was obviously fatter as well. She was sleeping well, and her appetite was fairly good. She was also no longer irritable. The mother was advised to continue with the same treatment.

August 17th. There has been continued improvement as evidenced by clinical examination, blood picture and weight gain. The child is now eating solid food well and getting a mixed diet suitable for her age.

September 28th. The child is now perfectly normal in appearance. Blood picture normal. She is eating and sleeping well. Bowels are quite regular. She is very active and does not appear to tire readily.

Shortly after this the family left Halifax and so we have not been able to further check up on the case.

Conclusion. A case of advanced nutritional anaemia with a quick and successful response to iron therapy and proper management.

N. B. COWARD.

Chronic Haemolytic Anaemia. (Probably Acholuric Jaundice)

Female aged 25 yrs., single. Admitted to Victoria General Hospital August 3rd, 1935 complaining of pain in the left loin.

Family History—Unimportant.

Personal History—Otitis Media and tonsillectomy in childhood. No serious illnesses. Menses—Regular, rather scanty, mild dysmenorrhoea.

Present Illness. On the day prior to admission the patient was in swimming. That evening she felt very chilly. In the early morning she was seized with a severe pain in the left loin radiating downwards to the groin. There was frequency of urination, some vomiting and considerable weakness. For several months she had not been feeling well. There had been some loss of weight, strength, and appetite and a slight cough. Recently she had noticed some frequency of urination but no other symptoms. The pain was relieved only by morphine and atropine hypodermically. She was admitted to hospital the same evening.

On examination, Temperature 99.2, Pulse 90, Respiration 20. Rather frail adult female, with an icteric pallor of the skin and mucous membranes. No petechiae; Tongue—rather coated; teeth in good condition; thyroid—not enlarged. Left ear drum irregular and hearing slightly impaired. Slight tenderness over left maxillary antrum.

Heart—faint systolic murmur in second and third right intercostal spaces; otherwise normal.

Lungs—slight impairment of percussion note over apices but no alteration in breath sounds and no rales.

Abdomen—marked tenderness in left loin and costo-vertebral angle, Liver, Spleen and Kidneys not palpable. *Rectal exam*—negative.

Central Nervous System—Normal, Ophthalmoscopy—negative.

Vertebral column—prominence of the spinous processes in the dorso-lumbar region, but no tenderness.

Catheter specimen of urine—trace of albumen and 5 or 6 pus cells per H. P. Field.

Leucocyte Count 19,800

The history, symptoms and signs suggested left-sided renal colic. Cystoscopy revealed slight injection of mucosa at base of bladder and left ureteral orifice, but otherwise normal.

Urine. Alkaline, Specific gravity 1024. Alb. 10 mgs. per 100 cc. Sugar negative. 8-10 pus cells per H. P. Field. Negative for Tubercle Bacilli. No pus cells in ureteral specimens.

Pyelogram. Normal.

X-Ray examination of lungs showed evidence of old disease of left upper lobe, with moderate fibrosis and calcification.

In view of the lack of evidence to account for the patient's symptoms, further investigation was carried out, as follows.

Blood.

Kahn and Hinton Tests—Negative.

Cultures—repeatedly sterile.

Icterus Index—10. Fouchet—positive.

Van den Bergh—Direct reaction—Negative.

Indirect reaction—positive.

Blood Picture. August 10th. Hb. 48% R.B.C. 2,980,000. W.B.C. 13,960 Color Index 0.80 Reticulocyte Count 5.4%.

Stained Films. Red cells—Achromia, Microcytosis, some poikilocytosis and polychromatophilia. A few cells showed punctate basophilia. White cells—no abnormal varieties.

<i>Differential</i> —Polymorphs.....	79.0%
Lymphocytes.....	15.6%
Large Monos.....	4.4%
Eosinophiles.....	1.0%
Basophiles.....	0.

Widal test for B. Typhosus, paratyphosus, abortus, melitensis, tularensis, proteus X19.—Negative.

Stools. Negative for occult blood, parasites and their ova.

Patient remained in hospital until September 27th. during which time she had repeated attacks of abdominal pain and tenderness and vomiting. The site of the pain was variable, sometimes in the left iliac region, at other times in the right iliac or again in the epigastric region. Pelvic examination—negative. During this time there was only an occasional slight elevation of temperature and pulse rate. She was given Ventriculin with iron, Marmite and a high vitamine diet. Repeated blood pictures showed a gradual improvement in the anaemia and the patient's icterus and pallor decreased.

September 27th. Hb. 84% R.B.C. 3,600,000, W.B.C. 8,600.

Blood Fragility Test showed a definite increase in the fragility of the red cells.

X-Ray examinations of the teeth, nasal accessory sinuses, gastro-intestinal tract and vertebral column were all negative.

Diagnosis. Chronic Haemolytic Anaemia (Probably acholuric Jaundice).

Evidence in favour of this diagnosis.

1. Repeated attacks of abdominal pain, tenderness and vomiting.
2. Icterus (Haemolytic type).
3. Hypochromic microcytic anaemia.
4. Reticulocytosis.
5. Increased fragility of the red blood cells.
6. Negative findings in the G. I. Tract, G. U. Tract, vertebral column, etc.

The spleen was never palpable but the pain in the left loin was probably due to some disturbance in that organ.

Since leaving the hospital patient has been taking iron constantly and has gradually improved in health, but there have been occasional attacks of abdominal pain and vomiting. The anaemia is only slight but the reticulocytosis persists. In view of the general improvement splenectomy has been postponed.

C. W. HOLLAND.

A Case of Secondary Aplastic Anaemia

This patient first became ill in October 1930 with caseous pneumonic type of pulmonary tuberculosis. Pneumothorax treatment began almost at once and the temperature which has been running up to 103 F gradually dropped to normal by the end of November, 1930. Pneumothorax was successful and collapse obtained was good. Patient caught a cold early in January 1931 and temperature became elevated and sputum which had been negative and scanty again became positive and copious. Sanocrysin treatment was given in March 1931, and patient had severe stomatitis and gastritis reactions, but a full series, beginning with .05 gm and increasing until a full dose of .5gm, was given. A dose was given every third day for twelve doses. The sputum became much less in quantity and the bacilli less numerous and in May the patient became afebrile. General condition improved and in September patient went home to continue treatment, in October exercise was started. In December fluid occurred in the pneumo space and was removed and a reaction took place on the following day. This reaction was febrile in character with stiffness and general malaise and followed each treatment when paracentesis was done. February 1932 bronchitis was contracted and bacilli reappeared in the sputum after three months absence, but disappeared again in two weeks.

June 1932 a blood picture was done and showed the following normal picture. W.B.C. 7,800 R.B.C. 5,000,000 HbO 110% and differential count Polym. 55.4% Lymph. 33.8% Monos. 7.2% Eos. 3.2%. In December 1932, developed a large abscess on back of neck and was pale and had bleeding from the gums on brushing teeth and blood picture showed W.B.C. 1,690 R.B.C. 3,240,000 HbO 45%. Differential count showed Polym. 17.5% Lymph. 79% Monos. 3% Eos. .5%. The report stated that the R.B.C. showed moderate achromia, some anisocytosis and poikilocytosis. There is some polychromatophilia and slight degree of punctate basophilia. There is a marked degree of secondary anaemia with a leucopenia and relative lymphocytosis present.

Occult blood was found in the stools when searching for some cause for the anaemia, and a barium series was done but nothing abnormal was found in the G. I. tract. Patient was placed on a modified Sippy diet and alkaline powders given along with general iron tonics. The blood picture done during January 1933 showed no change of any consequence and on the last of the month patient had an attack of the flu. Temperature ran to 104° F and for two weeks ran a septic type of temperature gradually receding to normal. Blood pictures at this time showed a further reduction in the white cell count, blood cultures were negative. Throat swabs showed *Streptococcus non-haemolyticus* and *pneumococcus* as the predominating organisms. A large ulcerative

canker sore the size of a large nickel or larger developed on the lower lip which with the induration rolled the whole lip outwards. Hot compresses applied to this and hydrogen peroxide mouth wash was used R.B.C. 2,102,000 HbO 41% W.B.C. 1040 with differential Polym. 33.2% Lymph. 57.7% Monos. 8.6% and Basop. .5%.

The W.B.C. on one occasion went down to 850.

Patient was put in Hospital and two dead teeth extracted. Pent-Nucleotide ordered but by the time it arrived from Philadelphia the blood count had changed to the following W.B.C. 3,160 R.B.C. 1,854,000 HbO 38%. Ventriculin with iron was given in 20 gm doses daily for ten days and then 10 gm doses for months, there was a gradual increase in the improvement of the blood picture for the next year.

June	1933	R.B.C. 3,544,000	W.B.C. 4,520	HbO 63%
July	1933	" 4,192,000	" 4,200	" 79%
Aug.	1933	" 4,450,000	" 4,080	" 78%
Sept.	1933	" 5,024,000	" 3,800	" 83%
Oct.	1933	" 4,872,000	" 6,160	" 80%
March	1934	" 5,200,000	" 5,840	" 94%
"	1937	" 4,510,000	" 4,350	" 92% with differential of Polym. 53%

Lymph. 36.5% Monos. 6% Eos 4.5%

Diagnosis: Secondary Aplastic Anaemia.

Etiology:—Infected dead teeth and possibly excessive exposure to X-ray from frequent fluoroscopic examinations. The Sanocrysin which is a Gold salt preparation may have had some part as in a recent issue of the British Medical Journal a group of cases very similar are reported following the use of gold salts in the treatment of arthritis.

Remarks. Liver therapy was tried but had no apparent value. Blood transfusion was considered but was held in reserve in case of necessity following the extraction of the teeth. Pent-nucleotide was not used as W.B.C. count had risen considerably before it arrived, but was kept on hand in case of a remission. The teeth removed were cultured and showed streptococcus non haemolyticus and staphylococcus albus with the former predominating.

This condition is described as due to depressed or inhibited activity of the bone marrow, perhaps due to direct toxic action or to the exhaustion of the bone marrow from preceding over-stimulation. Known causes are: (1). Chemical poisons as benzol. (2). Physical agents as X-Ray and radioactive substances. (3). Infections (4). Systemic diseases.

Differential Diagnosis: This is mainly from Pernicious anaemia and is made on the Color Index which in this case was consistently below the figure one.

Outcome of case. Patient's general and pulmonary condition improved and he has been at work since the fall of 1933. He is still receiving pneumothorax treatment but is not physically embarrassed from his chest condition and is able to carry on his normal occupation.

A. R. MORTON.

Primary Malignancy of the Thoracic Cavity

THE following case of primary malignancy of the thoracic cavity is being published in the BULLETIN because it is unusual inasmuch as the final post mortem diagnosis was a sarcoma of the defunct thymus gland. It also illustrates the importance of a haemorrhagic effusion in the pleural cavity as being of high diagnostic value in malignancy of the lung and pleura. One other striking feature of the case was the finding of such wide spread metastatic growths with so few symptoms.

The patient was a male aged 68, who was admitted to the hospital on April 2, 1937,—he was very ill, too sick to give us any history relating to his illness, his past life or his relatives. About one month previous to his admission he arrived at a boarding house and obtained a room. The landlady told us that he was an old gold prospector and his actions were queer—routing around the premises for buried gold. He did not appear to be particularly ill, except for several days before he came to the hospital, when he refused his meals and took several weak turns, finally remaining in bed because he was too weak to get up.

On physical examination he was not especially emaciated, he was cyanosed and very dyspnoeic, the pulse was small and weak, blood pressure was 98/52 and his temperature was subnormal.

On the left side of the chest the note was flat from apex to base, the breath sounds were absent and there were no adventitious sounds heard over this lung. The right side of the chest showed a rather hyper-resonant note with compensatory breathing throughout, there were a few rhonchi throughout the right lung. The heart was pushed well over towards the right pleural cavity. There were no special findings in the abdomen and no swelling of the legs.

In view of the findings in the chest we introduced a needle into the left pleural cavity and obtained 20 oz. of haemorrhagic fluid. We felt that there was considerably more present but the patient's condition was not good—we could not get the pulse at the wrist and his breathing was very laboured—so it was decided to allow him to rest and to administer stimulants hoping his condition would improve so that we could drain the pleural cavity next morning. He died during the night about twelve hours after admission.

Our clinical diagnosis was malignancy of the left lung. We are indebted to Dr. Gordon McCurdy for the following post mortem findings.

April 9, 1937. Dr. MacKenzie.

J. M., age 68.

Tissue No. 37—2121. Autopsy No. 37—16.

Autopsy performed by Dr. McCurdy on 5th. April 1937.

General appearances: The body was that of a fairly well nourished male of about stated age. The pupils were equal and appeared normal. Rigor mortis was present.

Head: The brain was removed and apart from some oedema and congestion it appeared normal.

Thorax: On removing the sternum a large whitish tumour was found in the upper anterior mediastinum, it was adherent to the tissues in the region

of the supraclavicular notch, laterally it invested the right and left bronchi and extended into the root of the left lung. The tumour had enveloped the ascending portion and arch of the aorta and the other great vessels in this region. The heart and both lungs and tumour were removed en masse. In the left apical region of the thorax there was a large raised plaque of greyish tumour deposit, a similar mass was seen on the right lateral wall of the chest involving the 6, 7, 8, ribs. There were also tumour deposits on the pleural aspects of both domes of the diaphragm.

The left pleural sac was distended with a slightly blood tinged yellow serous fluid.

The right pleural sac contained a few ounces of yellow serous fluid. On section the apices of the lungs were somewhat collapsed, the left more than the right; remaining portions of both lungs were well aerated. On section the lungs were oedematous and greyish finger like infiltrations of tumour were seen extending into the lungs from the hilum, surrounding the bronchi and compressing them. No relation between tumour and bronchial mucosa could be detected.

Heart: The pericardial sac contained a few cc of serous fluid. The heart was slightly enlarged. The coronary vessels were slightly sclerosed. The left ventricle was hypertrophied, the mitral valve normal, (admitted two fingers). The right ventricle was not dilated, the tricuspid valve admitted three fingers and appeared normal. Both auricles appeared normal.

Abdomen Liver: was not enlarged, it was smooth and regular in outline and brownish red in colour. On section it was rather pale in colour and had a mottled appearance.

The gall-bladder appeared normal and the bile ducts were patent.

Stomach: The stomach contained some partially digested food, the mucosa appeared atrophic; in the region of the fundus along the lesser curvature were four well defined shallow ulcers, their bases were quite soft. The pylorus appeared normal except for post mortem autolytic changes.

Spleen: The spleen was small and wrinkled. On section it was firm in consistence, a dull red in colour and the Malpighian bodies could not be made out.

Pancreas: A large secondary tumour nodule the size of a walnut was noted in the body of the pancreas.

Adrenals: Both adrenals were the seat of metastatic tumour, which were whitish in colour and soft in consistence.

Kidneys: Rt. kidney. The kidney was of normal size, the capsule stripped easily leaving a smooth dull red surface. On section the cortex was of normal thickness and was pale red in colour. The markings were not clearly defined. The medulla appeared congested. The pelvis normal.

Lt. Kidney same as for the right.

The prostate: was enlarged posteriorly and laterally. On section it was fibrous.

The Bladder: was distended with clear straw coloured urine. The mucosa appeared normal.

Histological Examination.

Tumour: The primary tumour is made up of large oval, round and polyhedral cells with deeply staining nuclei and scanty cytoplasm, these cells are arranged diffusely and are supported by a fine inter cellular reticulum, the blood

vessels are not very numerous and are of the capillary type. Necrosis is well marked. The tumour is a lymphosarcoma probably originating in the Thymus, i. e. a malignant thymoma.

Lungs: Sections from the lungs, show some congestion and oedema, and many areas of metastatic tumour infiltration, the secondary deposits are similar in structure to the primary tumour.

Liver: The cells show a fairly marked degree of fatty degeneration and atrophic pigmentation.

Spleen: The Malpighian bodies have almost entirely disappeared, the pulp is very cellular, the cells being chiefly reticulo-endothelial cells and lymphocytes, many of which are pigmented. Some of the sinuses are dilated and are filled with red blood cells. There is no increase in fibrous or reticular tissue.

Stomach: The gastric mucosa is atrophic and the seat of post mortem autolytic changes. The ulcers referred to above are of the acute type and were of recent origin, the ulcerative processes do not extend deeper than the sub-mucosa.

Both pancreas and adrenal are the seat of advanced autolytic changes and contain secondary tumour deposits which are similar in structure to the primary tumour.

Kidney: The Malpighian bodies are congested. The convoluted tubules and limbs of Henle's loop are the seat of advanced autolytic change.

The Prostate: shows an increase in fibromuscular tissue, atrophy of the adenomatous tissue and many of the acini contain corpora amylicae.

The thrombus: in the left prostatic vein is of the simple red type.

Section from the white matter and lenticular nucleus only reveals some congestion and oedema.

Diagnosis: Malignant thymoma with wide spread metastases.

GERALD R. BURNS.

A Case of Chorion Epithelioma Following Full Term Normal Delivery

Mrs. L. W., age 35, housewife. Admitted to Victoria General Hospital February 7, 1937, complaining of bleeding P. V.

Family and Personal History: negative.

Menstrual History: Began at sixteen years of the four to five twenty-eight day type, regular, three pads a day, no dysmenorrhoea. Last menstrual period January, 1936.

Obstetrical History: Seven pregnancies, two miscarriages. All normal with normal labour and puerperae.

Present Illness: Delivered of full term child on October 16, 1936. Following delivery she bled constantly to a slight degree and had several severe haemorrhages. On December 13th she had a dilatation and curettage with no benefit, a second dilatation and curettage was done on January 7, 1937, and the scrapings revealed on pathological examination, a chorion epithelioma. No other symptoms.

On examination there was a foul, bloody vaginal discharge. On the anterior wall of the vagina, just below the urethra was a sloughing area the size of a quarter—a secondary deposit. The uterus was large and had a boggy feel, but was not fixed. On February 8th examination of the lungs showed generalized metastases over both lung fields.

In view of the findings it was decided that nothing could be done in a surgical way because of the metastatic involvement. The patient gradually went down hill, but must have had a remarkable resistance, because for two weeks prior to her death on March 4th she ran a temperature between 100 and 102°, a pulse between 150 and 170 with respirations between 60 and 70. We were very fortunate in this case in procuring a post mortem, the report of which follows:

Autopsy performed by Dr. G. A. McCurdy

Mrs. L. W., age 35.

Tissue No. 37—1397. Autopsy No. 37—10.

The body was that of a moderately well developed white female that looked older than stated age. Rigor mortis was present.

Head: The brain was removed but it did not show any special pathological change.

The pituitary which appeared normal on cross examination was removed for histological examination.

Thorax: Both lungs were adherent to the chest wall, the adhesions which were of recent development, were easily broken down. When the lungs were removed their surfaces were nodular and were covered by recent fibrinous exudate. On section, the cut surface revealed numerous round reddish tumour nodules which bulged from the cut surface. The remaining unaffected lung parenchyma was congested.

Heart: The pericardial sac appeared normal. The heart was moderately enlarged (11 oz). The left ventricle was hypertrophied, the mitral valve admitted 2 fingers and the cusps appeared normal. The left auricle appeared normal. The right ventricle was slightly dilated, and attached to the columnar carnae was some antimortem blood clot. The tricuspid valve admitted three fingers and the cusps appeared normal. There was an antimortem thrombus (agonal) extending into the pulmonary artery. The right auricle did not show any special change.

Liver: The liver was enlarged about $1\frac{1}{4}$ times its normal size. It was regular in outline, a pale red in colour. On section it was very pale and somewhat oedematous. There were no gross evidence of metastatic tumour involvement. The gall-bladder was filled with a thick brownish bile and the mucosa was the seat of cholesterolosis. The bile ducts were patent.

Spleen: The spleen was enlarged to about twice its size, at its upper pole was a raised nodule about $\frac{1}{2}$ " in diameter, rather firm and whitish in appearance. On section, the nodule appeared greyish and necrotic and softened. The substance of the spleen was congested, soft and friable and the Malpighian bodies could not be made out.

Stomach: The gastric mucosa appeared normal.

The Kidneys were not enlarged, and were very flabby in consistence. Their capsules stripped easily leaving a rather pale smooth surface. On section the cortex was pale, oedematous and slightly thicker than normal. The normal markings could be made out with difficulty. The medulla was congested. There was no evidence of metastatic tumour involvement.

Pouch of Douglas: There were a few ounces of cloudy serous fluid at this site. There was no evidence of peritonitis however.

Uterus: The uterus was enlarged to about the size of a large grapefruit. The pelvic colon was adherent to the anterior portion of the fundus and when it was separated the uterus was found to be perforated at this point. The tubes and ovaries did not show any special change. On opening into the uterus and vagina posteriorly, a large reddish purple tumour the size of a walnut was found in the anterior vaginal wall, a similar tumour though larger and more irregular appeared on the anterior uterine wall, this tumour practically filled the uterine cavity. There was also a smaller tumour of a similar nature growing from the serous aspect of the posterior uterine wall.

The Bladder wall was not infiltrated by the tumour, and its mucosa appeared normal.

The lymphatic glands in the region of the bifurcation of the aorta were slightly enlarged, and rather congested.

The breast did not show any special pathological change.

Historical Sections.

Pituitary: The anterior lobe of the pituitary appears to be hyperactive.

Lung: The lung tissue is the seat of hypostatic congestion associated with oedema, the numerous metastatic nodules are composed chiefly of masses of syncytial cells with an admixture of Langhans cells.

Heart: The muscle fibres show fragmentation, fatty degeneration and lipochrome pigmentation.

Liver: The liver cells show fatty degeneration and infiltration, an increase in haemosiderin pigmentation. The Kupffer cells are also heavily laden with altered blood pigment. A careful search did not reveal any microscopic metastatic tumour deposits.

Spleen: The Malpighian bodies do not show any special change. The pulp is congested, very cellular and contains many cells loaded with altered blood pigment. The necrotic zone referred to above is of the nature of a false infarct.

The adrenals do not show any special pathological change.

Kidney: The glomeruli are enlarged, more cellular than normal and many pour into the proximal end of the convoluted tubules. The capsular epithelium is desquamated in some areas.

The convoluted tubules and loops of Henle show a marked degree of necrosis, in many of the cells the nuclei have ceased entirely to stain with haematoxylin. Some of the tubules contain a granular debris. The vessels do not show any special changes, and there is no increase in interstitial connective tissue.

Uterus: The uterine growth is a typical chorio-carcinoma which is made up chiefly of syncytial cells, with an admixture of Langhans cells; necrosis and haemorrhage is very extensive. The secondary nodules in the glands and vagina have the same structure as the primary growth.

Breast: The breast shows a moderate degree of hyperplasia of the glomerular elements. Some acini are dilated and contain a secretion which stains pink with eosin.

Pituitary: The pituitary gland does not show any special pathological change.

Diagnosis: 1. Primary chorio-carcinoma of uterus with metastases to vagina, lymphatic glands and lungs.

2. Acute catarrhal nephritis.

3. Heart failure.

W. G. COLWELL

Department of the Public Health

PROVINCE OF NOVA SCOTIA

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

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Marcus, S., Bridgewater (Mcpy.)
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Blackett, A. E., New Glasgow.
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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 April 1st, to May 1st, 1937.

During the month, 210 tissues were sectioned and examined, which, with 66 tissues from 10 autopsies, makes a total of 276 tissues.

Tumours, simple.....	25
Tumours, malignant.....	26
Tumours, suspicious of malignancy.....	3
Other conditions.....	167
Tissues from 10 autopsies.....	49

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

County	Chickenpox	Diphtheria	Cerebro Spinal Meningitis	Influenza	Measles	Mumps	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	Tbc.-other Forms	V. D. G.	V. D. S.	Whooping Cough	Goitre	Pink Eye	German Measles	TOTAL
Annapolis.....	3	140	3	1	2	..	..	..	..	..	..	1	..	..	..	150
Antigonish....
Cape Breton...	..	2	..	20	..	..	..	1	20	..	..	..	..	..	14	1	..	..	58
Colchester....	8	..	..	..	..	5	..	..	..	..	..	..	..	3	..	16
Cumberland...	30	30
Digby.....	1	..	..	..	..	..	..	..	..	..	..	1
Guysboro.....	3	..	..	..	..	..	..	1	..	2	1	..	..	..	..	7
Halifax City..	..	6	..	..	8	3	..	..	11	..	3	1	..	..	..	..	..	1	33
Halifax.....
Hants.....
Inverness.....
Kings.....	1	..	..	12	7	..	..	1	..	..	..	1	..	..	..	..	..	..	22
Lunenburg....	41	..	..	..	1	..	..	..	..	..	..	..	..	..	..	42
Pictou.....	..	1	..	63	2	..	..	2	..	..	1	1	1	..	..	..	..	..	71
Queens.....
Richmond....
Shelburne....	5	..	..	..	1	5	..	1	..	..	..	1	..	..	..	13
Victoria.....
Yarmouth....
TOTAL.....	1	9	..	155	157	6	1	9	41	..	6	3	3	1	16	1	3	31	443

Positive cases Tbc. reported by D. M. H. O's. 20

RETURNS VITAL STATISTICS FOR MARCH, 1937.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis.....	8	9	8	16	8	1
Antigonish....	11	17	0	8	12	2
Cape Breton...	114	123	26	52	37	9
Colchester....	26	17	8	16	19	5
Cumberland...	30	39	14	26	13	1
Digby.....	27	21	8	19	8	2
Guysboro.....	20	17	2	11	9	0
Halifax.....	117	106	29	83	77	5
Hants.....	34	32	15	13	14	2
Inverness.....	23	20	2	16	9	1
Kings.....	47	30	20	17	23	2
Lunenburg....	20	25	7	26	11	3
Pictou.....	27	21	14	25	26	2
Queens.....	13	9	4	10	11	0
Richmond....	12	11	2	7	9	2
Shelburne....	10	12	4	6	12	1
Victoria.....	5	4	2	5	3	0
Yarmouth....	13	19	5	14	12	3
	557	532	170	370	313	41

Personal Interest Notes

New Hospital at Cheticamp

On April 14th the first sod was broken by Rev. Patrick LeBlanc for the new hospital at Cheticamp. The new hospital will have forty beds and will be modern in all respects. The building will be of reinforced cement with brick facings. It will be ready for occupancy in December.

Dr. and Mrs. Donald Mainland of Halifax are sailing on the Polish liner Pilsudski on May 4th for the coronation.

Dr. and Mrs. W. Donald Rankin of Halifax are at present visiting in New York.

A letter has been received from our old friend Dr. W. B. Moore, formerly of Kentville, now a world trotter of renown, who, with Mrs. Moore, is now on the Pacific coast working northward. They travel by easy stages and the Doctor says that in eleven years of travelling, visiting twenty-five different countries, they have never slept in a sleeping car in all that period of travel.

Dr. M. J. Wardrope of Springhill spent Easter with his mother at Milford, who was celebrating her 91st birthday.

Under date of April 14th the Baddeck correspondent of the *Sydney Post-Record* has this incident to relate of the narrow escape from drowning of Dr. C. L. MacMillan of Baddeck.

"Dr. C. L. MacMillan and a companion had a narrow escape from drowning last week when the horse and sleigh they occupied plunged through the ice at St. Anne's Bay, near the Oxford Paper Company's plant at Murray. The doctor, who was proceeding to a sick call, had left Baddeck in his car, taking it as far as the travelling would permit, when he was compelled to resort to the use of a horse and sleigh. Accompanied by a driver he was almost across the bay when the ice suddenly gave way, the horse and sleigh going under. Despite herculean efforts they were unable to rescue the unfortunate animal and he perished, being carried under the ice before they were able to extricate him from the harness. Friends are all congratulating the genial doctor on his fortunate escape."

We are glad to note that the Medical Society of Nova Scotia realizes that the doctor is as necessary a factor in the operation of the Workmen's Compensation Board as is the applicant for its benefits. Dr. H. K. MacDonald and Dr. J. G. MacDougall appeared before the Law Amendment's Committee of the Assembly in April to reiterate the stand taken by Dr. MacDonald when he appeared before the Commission early in the course of the sittings of that body. Let it be clearly understood that the rights of the doctor are just as properly the business of legislation as those of the applicant for relief.

The Editors.

haemolytic streptococcal infections . . .

EFFECTIVE ORAL TREATMENT

Ayerst

SULPHANILAMIDE

(para-aminobenzene-sulphonamide)

The protective and curative value of para-aminobenzene-sulphonamide in streptococcal infections has been reported consistently by investigators using haemolytic streptococci of varying serological types.

Encouraging laboratory and clinical results* warrant that this product be made available to the medical profession. "Although much remains to be done in discovering the capacity and limitations of these remedies, it has become an imperative duty to employ them not only in puerperal fever, but also in other severe forms of streptococcal infection." (*Lancet*, Dec. 5, 1936)

Under the name of "Sulphanilamide", we are now making available a convenient dosage form of para-aminobenzene-sulphonamide, each tablet containing 7½ grains (0.5 Gms.).

In bottles of 25 and 100

PHYSICIANS' CORRESPONDENCE INVITED

* Partial Reference List—

Colebrook, L. & Kenny, M., *Lancet*, 1: 1279 (June 6) 1936.

Colebrook, L., Buttle, G. A. H. & O'Meara, R. A. O., *Lancet*, 2: 1323 (Dec. 5) 1936.

Lancet, 2: 1339 (Dec. 5) 1936.

Trefouel, J., Nitti, F. & Bovet, D., *C. R. Soc. Biol. Paris*, 120: 756, 1935.



AYERST, McKENNA & HARRISON LIMITED

Biological and Pharmaceutical Chemists

Sir Andrew MacPhail, Professor of the History of Medicine at McGill University has retired after many years of service to the medical profession in Canada. He is a native of Prince Edward Island and is widely known as an author of medical works and other literature.

Dr. Eric W. Macdonald of Reserve Mines returned on April 8th from several weeks vacation spent in the United States. We are glad to note his health has greatly improved.

Dr. R. H. Sutherland addressed the monthly meeting of the Pictou Women's Council on "Diseases of the Heart". As he used the blackboard he probably thought he was back teaching school.

We regret to learn that Dr. A. F. Miller of Kentville is still confined to bed following an attack of Influenza.

We are pleased to hear that Dr. W. R. Barlow of Centerville has made a complete recovery from a severe attack of Pneumonia.

Dr. Peter O. Hebb, Dal. '34, who has completed a year's post-graduate study in London, England, has returned to Nova Scotia and plans to practise in Dartmouth.

The engagement is announced of Miss Kathleen (Kaye) Mary Kilgour Napier, daughter of Mr. and Mrs. W. F. Napier of Campbellton, N. B., to Dr. George L. Covert, son of Lieutenant-Governor and Mrs. Covert. Dr. Covert graduated from Dalhousie in 1934 and took post-graduate work at Edinburgh, and received experience at Radcliffe College, Oxford. Miss Napier also graduated from Dalhousie University.

Congratulations to Dr. and Mrs. E. L. Eagles of Port Maitland on the birth of a daughter on April 19th, and also to Dr. and Mrs. J. A. F. Young of Scotsburn on the birth of a daughter.

Dr. C. K. Fuller of Yarmouth was among the directors named at the annual meeting of the Nova Scotia Motor League on April 20th at Halifax.

Dr. J. A. Langille of Pugwash has recovered from a rather severe attack of Influenza and has now resumed practice.

We are sorry to hear that Dr. A. R. Campbell of Yarmouth is seriously ill with Pneumonia which followed an attack of Influenza. The doctor has been confined to the Yarmouth Hospital for some days.

Report on Health Survey of School Children at Kentville

Dr. J. P. McGrath, Chairman of the Medical Committee, gave the following report on the survey of the health of school children at Kentville in 1937. "In the school survey of February, 1937, held under the direction of the

STELLIDINE

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A 4% aqueous and sterile solution of Histidine

FOR THE TREATMENT OF PEPTIC ULCER

Favourable results are reported from the use of STELLIDINE in:

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- STELLIDINE is a product of absolute purity;
 - It offers all possible guarantee of tolerance and therapeutic activity;
 - It is a "Poulenc" product, made in Canada;
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Victorian Order of Nurses' Society of Kentville, 92 children were examined. Of this number 62 were X-rayed, and 48 were tuberculin tested. A tabulation of the defects follows:

Tuberculin test—29 negative, 19 reactors, and 44 refused.

X-ray examination—47 negative, 15 with childhood tuberculosis, 22 of whom needed further examination, 1 refused.

Defective vision—25, 4 of whom need re-testing in one year's time, and 6 who have been corrected.

Defective tonsils and adenoids.....	41
Defective teeth.....	73
Wax in ears.....	9
Further chest examination.....	22
Nasal defects.....	8
Enlarged glands.....	2
Skin disease, acne.....	2
Anaemia.....	3
Underweight.....	6
Kidney condition.....	2
Poor posture.....	2
Hernia.....	1
Heart.....	1

This is a fine job they are doing at Kentville and should be a good example to other towns in the Province. The physicians, nurses, dentists and interested lay members of this group are to be congratulated.

Annual Report, Department of Scientific and Industrial Research

As apples grow older in the open air there is a "steady rise in the concentration of alcohol in the flesh of the fruit."

A problem is here that awaits its discussor—
As apples grow older their morals grow "wusser";
The alcohol habit doth hamper and cripple;
They sit in the open and steadily tipple.

When apples are younger their aspect is greener,
Which may be the sign of their nobler demeanor;
The redness some take to mean ripeness of fibre
May be but the flush of the constant imbiber.

A warning may lie in that ruddy complexion—
But do not lose sight of another reflection:
Green apples, though morally sound and superior,
Don't always agree with the human interior.

Before with the elderly apple one quarrels,
Remember, there's more in this matter than morals;
The greener the apple, the greater the danger,
For green is the sign of the tummy-deranger.

So what is the total abstainer's position,
With fruit that is any way under suspicion?
Should he wait till the apples have grown alcoholic,
Or eat 'em when green, thus encouraging colic?

TRADE **PYRIDIDIUM** MARK

(Phenylazo-Alpha-Alpha-Diamino-Pyridine Mono-Hydrochloride)

**U R E T H R I T I S**

As adjuvant therapy, the oral administration of Pyridium often brings prompt relief to the distressing symptoms which frequently accompany urethritis. Shortening of the duration of treatment and reduction of the number of instances in which complications develop have been reported.

When local treatment is indicated, the use of Pyridium solution may be effectively combined with the oral administration of the tablets. The preparation is non-toxic and non-irritative in therapeutic doses.

Pyridium is available in tubes of 12 and bottles of 50 (0.1 gram) tablets; 1% solution in 100 cc. bottles; powder in 2, 5, and 10 gram bottles; and 3% ointment in 40 gram collapsible tubes. Descriptive literature sent upon request.

MERCK & CO., Limited*Manufacturing Chemists***MONTREAL,****P. Q.**

Sulphonamide-P B.D.H.

Sulphonamide-p is the name given by The B.D.H. to para-aminobenzene-sulphonamide, which substance has been made experimentally in The B.D.H. Laboratories for some time past; latterly a process has been developed for its manufacture in a state of purity on an industrial scale. During the experimental stages attention was paid particularly to its production in a pure state, and a paper on this aspect of the subject, by a member of the staff of The B.D.H. analytical laboratory, was published in the *Quarterly Journal of Pharmacy and Pharmacology*, Vol. IX., No. 3, 1936, pp 560-566.

Para-amino-benzene-sulphonamide was first described under the name Sulphonamide-p in the *Lancet* of December 12, 1936, p. 1443. Clinical evidence shows that this substance possesses remarkable bacteriostatic and bactericidal activity against haemolytic streptococci even when administered orally.

It is employed in the treatment of puerperal septicaemia and erysipelas and in other conditions due to infections of haemolytic streptococci such as scarlet fever, tonsillitis, etc. It has also a wide prophylactic use.

Sulphonamide-p B.D.H. is issued in tablets for oral administration each containing 0.5 gramme of the pure substance. The tablets are supplied in bottles of 25 and 100 respectively.

Sulphonamide-p B.D.H., in common with other B.D.H. medical products, is available for clinical use through retail pharmacists.

Descriptive leaflet will be sent to physicians on request to The British Drug Houses (Canada) Limited, Terminal Warehouse, Toronto.

THE Staff of the Children's Memorial Hospital, Montreal will repeat the post-graduate course in the Medical and Surgical aspects of the Diseases of Children during the week of September 13th next. The course which was given last year met with unusual success. Many more applications were received than could be accepted. It is expected that this year applications will again far exceed the limited accommodation available. Those desiring to apply for the course are urged to do so without delay. The registration fee is \$15.00. This will include daily lunches at the Hospital for the duration of the course as well as other entertainment including a dinner at the Faculty Club when a prominent speaker will be the guest.

RESYL "CIBA"

A distinct advance in the treatment of Bronchial Affections

Creosote, although possessing certain very definite therapeutic properties, has disadvantages that interfere materially with its clinical employment. According to Sollmann, the introduction of guaiacol marked an advance, because "Guaiacol constitutes from 60 to 90% of the creosote and shares all its properties, with the advantages of constant composition." Unfortunately, guaiacol, itself, is irritating and possesses a taste that is difficult to mask.

On the other hand, RESYL "CIBA", the glyceroguaiacol ether is non-irritant, although having a definite antiseptic action. Resyl is freely soluble in water, and is available in easily-taken tablets for oral use, or in ampoules for intramuscular administration. Of even greater importance is the fact that Resyl "CIBA" is well utilized by the tissues, in marked contrast to potassium guaiacol sulphionate occasionally prescribed, which is excreted in the urine to a large extent unchanged.

TABLETS OF 1½ grs. IN BOTTLES OF 30
(Also in bottles of 500 for self-dispensing
doctors and hospital use.)



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**ANNUAL POST GRADUATE COURSE in
THE DISEASES OF CHILDREN**

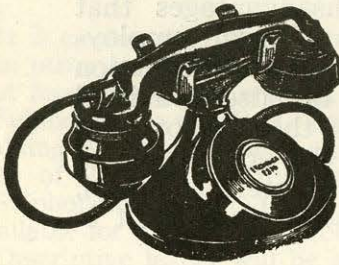
MEDICAL SURGICAL SPECIALTIES

Week of **SEPTEMBER 13th, 1937**

Registration Fee \$15.00.—Includes daily luncheon at the Hospital, a dinner at the Faculty Club and other entertainment. Last year many applications were refused for lack of accommodation. Apply with remittance to:—

DR. J. E. DeBELLE,

Superintendent Children's Memorial Hospital, Montreal

**No Greater
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Any physician who has a bedside extension telephone will agree that it is one of the most convenient features of his home. It not only enables him to answer night calls without leaving his bed, but prevents disturbance of the other members of the household as well.

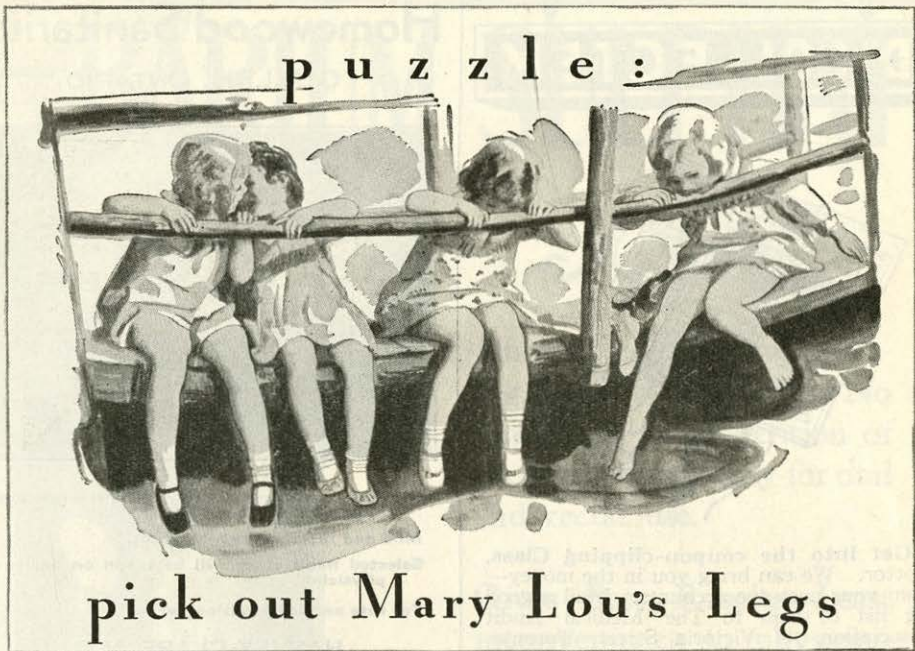
For a few cents a day you, too, can enjoy the priceless convenience of a bedside telephone. And it will be appreciated not only by yourself, but by everyone in the house. Call our local office for details and rates.

Maritime Telegraph & Telephone Company, Limited**OVER THE FENCE IS OUT**

The money that we spend for foreign-made goods goes "over the fence" and we are "out" just that much, for very little of that money will ever return to us. This fact is not appreciated by the people of the Maritimes as much as it should be. Here we with an abundance of natural resources, have very few local plants manufacturing them. Would it not be to our advantage to patronize those industries which we have whose payrolls and supplies are spent and purchased in such a way as to benefit the whole community.

Trade with those who will most readily trade with you. Buy things made or produced near home, buy Maritime products whenever what you want is made in the Maritimes, failing that, seek to buy within Canada and if what we want is not made within our Dominion we shall surely find it made within the Empire.

INSERTED BY A MARITIME MANUFACTURER



Mary Lou had rickets when she was a baby. Once that might have made her easy to identify! But now doctors know how to treat rickets effectively, and they know what to do to prevent it. Promptly treated, rickets seldom results in bow legs or knock knees. So the answer to our puzzle is—you can't pick out Mary Lou!

Fewer children with iron braces! More children with legs as straight and handsome as young saplings! Fewer hollow chests! More well-shaped jaws and pleasing little profiles! *These are some of the advantages which modern developments in vitamin medication—especially vitamins A and D—have made possible.*

Here is something we'd like to have you

keep in mind: Problems involving vitamins have been studied in the Parke-Davis Laboratories every day for over twenty years—a rich background of experience. For your

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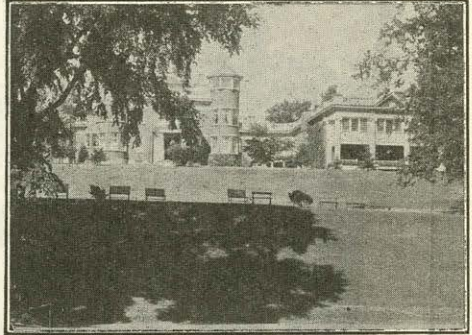




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