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Diabetes In Pregnancy*

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DIABETES Mellitus without a doubt constitutes one of the grave complications of pregnancy, a complication fraught with danger to both mother and child. Diabetes occurring during pregnancy is more common than pregnancy occurring during the course of Diabetes. The diabetic woman seldom becomes pregnant and for several apparent reasons. First, the peak of incidence of the disease among adult females coincides with the menopause; second, there is often a lack of potential fertility as evidenced by the frequency of menstrual disorders, especially amenorrhoea; third, fertilization may be prevented by abnormal secretions resulting from vulvitis, vaginitis and cervicitis; fourth, contraception is prompted by the patient's or her physician's fear that pregnancy will be badly borne.

Insulin may increase the fertility of the diabetic by establishing or re-establishing menstruation after long periods of amenorrhoea. It follows therefore, that under present day treatment the incidence of pregnancy in diabetics is likely to increase.

There occurred recently in this city two cases of pregnancy in diabetic women which terminated successfully for both mothers and children. Their management presented an interesting problem and prompted a review of the literature bearing on the subject. The literature is naturally divided into that written before, and that written since the advent of Insulin about eleven years ago.

In the pre-Insulin era the maternal mortality was from 25 to 55 per cent., death usually resulting from coma or infection. Death of the foetus in utero was generally due to acidosis; abortion and miscarriage being therefore frequent. Hydramnios occurred in 25% of cases, whilst the customary large sized foetus rendered labour difficult. Congenital abnormalities were not infrequent. Therapeutic abortion was commonly practised. These various factors all contributed to the very high foetal mortality of 45 to 65%.

Insulin and modern treatment have reduced the maternal mortality to about 8 or 9%, and have considerably enhanced the chances of preserving the life of the baby. The highest foetal mortality in any recent series is 37%. These improvements, however, are far from the obstetrical ideal. Congenital diabetes is rare but glycosuria may be present for a brief period owing to the hyperglycaemia existing at birth. Hypoglycaemia is more to be feared owing to the overproduction of insulin resulting from the compensatory hypertrophy of the pancreas.

According to Joslin diabetes is more menacing to pregnancy than pregnacy is to diabetes. The dangers to pregnancy have already been mentioned. As to the influence of pregnancy upon diabetes some authorities claim that there is an increase in carbohydrate tolerance during the latter months, while

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others state the reverse. No doubt an increase does occur in a few cases, but there is no proof that it is due to a transferance of insulin from the foetus to the mother. However, a gain in tolerance may follow delivery and patients receiving insulin may suffer from hypoglycaemic reactions. Ketonuria is common in pregnant diabetics and there is thus a special liability to coma in badly treated cases. These patients are liable to sudden changes in metabolism—e.g. eclampsia, acidosis, coma, and hypoglycaemia, before, during and after labour. Following delivery there is usually quite a marked improvement in the diabetes, and generally speaking it would appear that pregnancy has no permanent ill-effects on the disease.

Diagnosis. In the event of pregnancy occurring in a known diabetic the attending physician's problem is merely one of management, whereas the discovery of glycosuria in a pregnant woman is primarily one of diagnosis. Sugar in some form has been found on routine urinalysis in 4 to 13.6% of pregnant women. On discovering sugar in the urine the first step is to determine whether it is glucose or lactose (other reducing substances, e.g. pentose, laevulose, etc. are rare). Lactose may be present in the latter week of pregnancy and during the puerperium (3.5%). The blood-sugar, fermentation and phenylhydrazine tests will serve to distinguish it from glucose. Having found that the urine-sugar is glucose, the next step is to ascertain the cause. In all probability it will be one of the following:—diabetes mellitus, the so-called alimentary glycosuria, or renal glycosuria. In rare instances the glycosuria is due to hyperthyroidism, pituitary, renal or gall-bladder disease and clinical evidence is present; or to some transient cause such as cerebral trauma, drugs or emotional upsets.

A careful inquiry into the family and personal histories is essential. A history of definite diabetic symptoms during previous pregnancies, especially if the babies were heavy or stillborn, is in favour of diabetes. The presence of such symptoms as polydipsia, polyuria and pruritus may or may not be due to diabetes, but suggest it. They are not uncommon in non-diabetic glycosuria, or indeed in a pregnant woman with normal urine. The discovery of a large foetus or hydramnios suggests diabetes. In the absence of starvation, vomiting and diarrhoea, acetonuria accompanying the glycosuria usually means diabetes. The amount of sugar in the urine is usually greater in diabetes than in other glycosurias. The blood-sugar in the fasting state and following a glucose-tolerance test is characteristically elevated. When possible this test should be done in all doubtful cases.

In alimentary glycosuria or, as one writer calls it "Impaired Carbohydrate Tolerance of Pregnancy," there are as a rule no symptoms of diabetes. The glycosuria is due to a lowered renal threshold and follows the ingestion of an average meal or the glucose-tolerance test. There is a lowered assimilation limit for carbohydrate and the blood-sugar curve after a tolerance test shows a delay in its fall. The fasting blood-sugar is under 0.12% and seldom reaches 0.20% following a test. The question naturally arises as to whether these cases are not true diabetes in a mild form, that is, in a pre-diabetic state. It is probably advisable to regard them as such.

There has been a tendency in recent years to use the term renal glycosuria rather loosely. The latest publications from the clinics of Joslin and Rabinowitch indicate that the condition is a rare one. The criteria for diagnosis are as follows:—

1. Glycosuria without hyperglycaemia. A fasting blood-sugar under 0.12%, and after a glucose-tolerance test not over 0.17%. Every specimen of urine must contain glucose.
2. Glycosuria is independent of diet.
3. The blood-sugar level is influenced only slightly by the ingestion of food.
4. The symptoms of diabetes mellitus are absent.
5. The sugar in the urine must be glucose.
6. No progression towards diabetes over a period of years.
7. The patient must be able to store and utilize glucose in normal fashion.

With the above criteria in mind it is a simple matter to differentiate renal glycosuria from the other types.

Treatment. Renal glycosuria needs no treatment, but if necessary a lotion may be employed to relieve the pruritus.

Alimentary glycosuria requires moderate restriction of diet and the giving of insulin if necessary. Doubtful cases are best treated as diabetes.

The treatment of diabetes during pregnancy is similar to the treatment of the disease at other times, keeping in mind the unstable metabolism of these individuals and making due allowance for their dietetic whims. Close and persistent observation of the patient is imperative, and the importance of compliance with instructions must be stressed. Foci of infection should, if possible, be eradicated. Avoidance of colds and contact with infectious diseases is important. Dental hygiene should not be forgotten.

Diet. Slight undernutrition is to be encouraged as this helps to control the diabetes and delivery will be easier because of a smaller baby. The caloric requirement should be based on 25-35 calories per kilogram body-weight of the patient. Protein should be 1-1.3 grams per Kg. body-weight, while the carbohydrate should be liberal and the fat moderate in amount.

C—120-140 grams; P—60-80 grams; F—90-110 grams. The relatively high carbohydrate diet promotes the storage of glycogen in the liver and prevents acidosis. The calcium supply should be generous and cod liver oil is valuable for its vitamin content.

Insulin. It may or may not be necessary to use Insulin. Small doses given frequently are preferable to large doses at greater intervals, as hypoglycaemia is thus prevented. The dose depends on the carbohydrate tolerance. Insulin exerts no deleterious effect on the foetus.

Urinalysis. Several urinalyses daily, especially near term, are advisable, whilst an occasional blood-sugar test is helpful.

The patient should be in hospital during the last few weeks of pregnancy.

Coma. If coma occurs the foetus will likely die. There is no advantage in emptying the uterus. It is better to wait for the natural onset of labour, meanwhile treating the coma with the customary measures.

Therapeutic termination of pregnancy may be necessary when the diabetes is severe and difficult to regulate, or when severe acidosis and uncontrollable vomiting are present, or if the patient is ill-nourished and emaciated and therefore unfitted to stand the strain.

Primipara requires special care and consideration. The question of Caesarean Section at 8 or 8½ months under spinal anaesthesia is likely to arise, as it seems to offer the best chance for a living child. If deemed advisable, sterilization can be performed during the operation. Until the last few years it has been the practice at the London hospital to effect delivery by Caesarean Section under spinal anaesthesia on the grounds that a difficult labour or an emergency general anaesthetic are thus avoided. More recently they have

been allowing patients to go to term and be delivered naturally, provided the latter have been under antenatal supervision, that the disease is controlled, and the foetus not large. (Joslin states that operative deliveries are not contra-indicated in controlled cases). Sepsis is no more frequent than in normal cases.

During labour or in the event of a Caesarean Section, the patient should receive orange juice, milk, glucose, etc., in amounts corresponding to the carbohydrate of the diet. Insulin is given in the usual doses with maybe a few additional injections. The urine should be examined frequently (every three or four hours) and the blood-sugar once daily or when deemed advisable. If a general anaesthetic is necessary, gas and oxygen is the best form. Nembutal, morphine, atropine, and hyoscine are not contra-indicated. Pituitrin has been given without harm in spite of its physiological antagonism to insulin.

During the puerperium the patient is liable to hypoglycaemic reactions unless the dose of insulin is properly regulated. For a few days after delivery, the diet should consist of liquids and soft solids.

Lactation. Authorities differ as to whether the diabetic mother should nurse her baby. It is apparently not harmful provided the disease is under control and the diet adequate.

Marriage. Should diabetics marry? It would probably be better if they did not, but the fact remains that they will. Diabetes is not the hopeless condition it was a decade ago. Rabinowitch states that a diabetic need not be told that she must not become pregnant, while other authorities advocate the avoidance of the complication.

Sterilization. There is much controversy on this subject. Each case must be adjudged individually. There are many points to be considered, e.g. the home conditions, the number of children already in the family, the patient's wish regarding additional children, religion, the severity of the disease and its response to treatment, the degree of co-operation of the patient, and the hereditary nature of diabetes.

Case 1. Age 37. Diabetes mellitus was diagnosed three or four years ago. In the summer of 1931 the disease was controlled by means of the following diet:—C 120, P 75, F 160—cal. 2220 and insulin 20-15-15. There was a secondary anaemia and achlorhydria. She was given ventriculin with iron and dilute HCL. The patient gained weight and felt fairly well during 1932. Pregnancy took place and was due in March, 1933. Patient admitted to Halifax Infirmary, February 20th on the same diet as above and insulin 55 units daily. On March 5th the carbohydrate was increased to 130 grams on account of slight acetonuria. There was still a secondary anaemia R. B. C.—3,700,000-4,000,000—Hb—55-62%.

Blood-sugar tests. 148, .142, .138, .132, .110. After careful consideration of the case it was decided that, in view of the presence of diabetes and secondary anaemia in a primipara of 37 years, a Caesarean Section at 8½ months would be the proper procedure. Operation was performed under spinal anaesthesia, Fallopian tubes were not tied off. The operation caused very little upset in metabolism. The diet for four days after operation was cals. 1122, 1018, 999,1157 along with the usual dosage of insulin (the diet was given in the form of liquids) blood-sugar 0.12%. Urine showed mild glycosuria and acetonuria intermittently for a few days and diacetic acid on one occasion only. The baby was given artificial feedings. Mother and child have been doing well since though the former, of course, still requires the customary diet and insulin.

Case 2. Admitted to Victoria General Hospital April 26th, 1932 from the Grace Maternity Hospital. Age 28, married several years; menstruation had always been irregular. Eighteen months previously diabetes was discovered and the patient admitted to the V. G. Hospital in coma. On discharge she was taking 15 units of insulin three times a day and continued the treatment at home. Six months later she had a miscarriage at two months. In the Fall of 1932, she became pregnant again; during the first seven months she took insulin 5 units t.i.d. but had to increase the dose to 15 units t.i.d. owing to an increase in the urine-sugar. One week before admission blood-sugar 0.21%. She was admitted complaining of pruritus and pain below the right breast.

Examination revealed a 7 mos. pregnancy with a ROA presentation. Kahn-neg. Admittance diet C 85, P 40, F 70—cal. 1130, insulin 12-10-12. April 27th fasting blood-sugar 0.10% (patient had received insulin the night before). Urine showed acetone, but only a trace of sugar.

	C	P	F	Cals.	Insulin
April 29th	100	50	85	1365	15-15-15
May 3rd	120	55	90	1510	15-15-15
May 6th	140	55	90	1580	20-15-15
May 8th	150	65	100	1760	25-25-25

During the above period urine showed sugar occasionally, but persistent acetone until the carbohydrate was increased. On May 30th an insulin reaction occurred (sweating, headache and visual disturbance). In viewof the history of coma, the patient's lack of co-operation, the good results in Case 1, it was felt that a Caesarean Section would be the best procedure. June 7th was the date selected for operation. Urine was negative, patient was given nembutal, grs. III and atropine, gr. 1/150 at 8.00 a.m. Caesarean Section under spinal anaesthesia; Fallopian tubes tied off (patient's permission obtained beforehand). Following operation, patient was given morph. gr. 1/6, hyocine, gr. 1/150. Urinalysis every three or four hours. First few specimens showed acetone, but no sugar. Patient was given plenty of fluids, e.g. orange juice, ginger ale, milk, broth (in small amounts every hour). Blood-sugar normal. Next day the urine contained 4%-0.5% sugar but no acetone; the sugar was due probably to the increase in carbohydrate intake. Insulin was given more frequently and the glycosuria controlled. The baby was given artificial feedings; patient made an uneventful recovery and was discharged on June 26th with the following diet: C 150, P 65, F 100—cals. 1760, and insulin 15-10-10. Both mother and child have done well. The former is still taking insulin though the dosage has been reduced.

Conclusion. Each case of diabetes in pregnancy is an individual problem. No hard and fast rules of procedure can be laid down but an understanding of the general principles of modern treatment will enable the physician to give his patient the benefits of that treatment with the result that the present all too high maternal and foetal mortality rates will become increasingly lower to the everlasting credit of medical science.

The Practice of Medicine of 1883, and the Present Time Comparison

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Members of The Valley Medical Society, Gentlemen:

AS DR. H. G. GRANT, the new Secretary of The Nova Scotia Medical Society wrote me some time ago, requesting on behalf of the Editorial Board of the BULLETIN, something from me in regard to my experiences in a medical way, I thought it a good thing to first try out my paper on you, Gentlemen, and if you survived the ordeal, to send it along.

I started out in the study of Medicine, in the Fall of 1878, in the office of Dr. James A. Coleman, Granville Ferry, putting the most of my time in the study of Osteology, with a little Materia Medica thrown in, such as putting up prescriptions, rolling out pills of course, under the Doctor's supervision.

Dr. Coleman had the distinction of being the sole host of The Medical Society of Nova Scotia, which met in Granville Ferry in the early 90's. We were royally entertained by our host. The delightful excursion, down the Annapolis River, and Basin, and up to Bear River, is one of our delightful memories. The Society showed its appreciation by electing him their President. I then put in four years at the Halifax Medical College, graduating in 1883, when just past my 23rd birthday. The last year and a half was spent in the old Provincial and City Hospital (as it was then known), first as Clinical Clerk, and then as House Surgeon. Then a year was spent in New York at the Polyclinic. After that, with the exception of the five years or more spent in War Service, and occasional trips to Medical Centres, in this country and abroad, I have been in general practice, in Middleton. Those graduating with me were D. N. Morrison and G. H. Fulton.

Dr. Morrison was born in Loch Lomond, C. B. He practised first in Westport, Digby Co., then in Oxford and later in Sydney, where he died in 1911. His daughter is married to Dr. Kenneth MacKenzie of Halifax, and his son is Dr. Lewis N. Morrison of Mahone Bay.

Dr. Fulton first went to the Yukon, where he spent a year and a half. He is now located in Malden, Mass., where he has been in active practice for a great many years. In July of this year, Dr. and Mrs. Fulton celebrated their golden anniversary. They have three married daughters who are all located quite near them.

So far as I am able to learn, those who were fellow students with me, and are still alive, are Dr. Arthur Kendall and Dr. J. K. MacLeod, both of Sydney, and Dr. J. W. Reid of Windsor. I rather think Dr. C. A. Webster of Yarmouth was a first-year student in my final year, as was Guy Carlton Jones (afterwards Major General Jones) and Dr. Primrose of Toronto.

In the Medical College, which was located on College Street and which is used now for another purpose, there were lecture rooms on the first floor, a

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dissecting room upstairs, and a recreation room in the basement.

Dr. A. W. H. Lindsay, who was our Anatomy Demonstrator, was most thorough and painstaking, I, as one of his old students, desire to pay this tribute to his memory. Those of his students, who had a couple of years under him, and afterwards went to New York to finish up, became noted for their proficiency in this particular branch. Any man coming was supposed to have his Anatomy well up. The late Dr. F. U. Anderson dissected with me at the same table.

The Lecturers were as follows: Dr. Sinclair, Anatomy; Dr. J. F. Black, Materia Medica; Dr. Somers, Physiology; Drs. Farrell and Arch. Lawson, Surgery; Dr. W. B. Slayter, Obstetrics; Dr. Woodall, Diseases Women and Children; Dr. A. P. Reid, Medicine. Of these, our most interesting Lecturers were Farrell, Slayter and Sinclair.

Reference should also be made to "Skelley" the old Janitor, who was an old soldier, with a villianous temper, which was not improved by the pranks "the Boys" played on him. The late Dr. A. C. Hawkins was his particular aversion, who was referred to by Skelley as "That bloody 'Awkins". One day the "Boys" were out indulging in a little snow-balling. Skelley came out on the front door steps, smoking his old clay pipe. Hawkins took a shy at him with a snow ball, and it must have been a wonderful shot, for it took the bowl right off, leaving only the stem in the old man's mouth. Perhaps the air wasn't blue around there!

The Hospital. Dr. W. B. Moore was the House Surgeon in '79-80, and well do I remember with what awe, we, of the first year regarded him. He was followed by Mosely, then by DeMille (son of Prof. DeMille), and then by myself. Things were very different in those days from what they are now. There were only two house officers, a house surgeon and a clinical clerk. We had an old lady as Matron, and one fairly well trained male nurse. There was no training school for nurses, and no trained nurses, consequently we had to attend to most of the dressings, and nursing ourselves. Those who acted as nurses, were usually convalescent patients, old soldiers, and such as we picked up as likely to fill the bill. Anti-sepsis and A-sepsis were unfamiliar terms, and it was not thought quite right, if a wound did not discharge a little pus. The term "laudable pus" was then in frequent use.

Of course, all this had to come to an end, and it did in a most tragic manner. We were visited by an epidemic of what is known as Hospital Fever. Each and every surgical case, was attacked by Erysipelas and Cellulitis, many of the cases being extremely ill, with rigors, followed with extremely high fevers.

Some of the patients were veritable bags of pus. Oh my! I shall never forget those days. Of course, the Hospital had to be cleared—the patients put out in tents. There was a strong run on whiskey and quinine, and it was my duty as Clinical Clerk to keep the bottles filled. Then was inaugurated a process of cleansing and purification and the first of the many improvements which eventuated in our present Victoria General Hospital.

I think it was in 1882 that the late Dr. A. W. H. Lindsay, arrived from Edinburgh, with his Carbolic Spray and the new methods of Lister. Its novelty excited much talk, some of which was decidedly critical. About this time a woman arrived in Hospital, suffering from an ovarian tumor and for the first time in this province an abdomen was opened deliberately, to perform an operation.

A room in one of the Annexes was fitted up as an operating room it being considered more safe than the regular operating room.

Picture the scene. In a room fairly well filled with on looking Medical men in their ordinary every day clothing, led by curiosity, and with a mixture of scepticism, with Dr. Sands a noted Surgeon of New York who happened to be visiting Halifax watching proceedings, and giving Dr. Arch. Lawson, the Surgeon, advice from time to time, the stage was all set for the first abdominal operation in Nova Scotia. The patient was prepared by having a rubber sheet spread over her abdomen, in which there was a hole of considerable size to expose the field of the operation, and fastened to the abdomen by some sticky substance.

Dr. Lindsay was there with his Carbolic Spraying Outfit. The surgeon's hands and instruments were soaked in a solution of phenol or carbolic acid. Absent were the sterilized gowns, the masks, and caps, or rubber gloves, or the spick and span nurses without whom the present-day surgeon would feel rather lost.

My part in the performance was to keep a Paquelin Cautery ready for nstant use. However, it was not called for.

I may say, the patient did remarkably well, and made an uneventful recovery, even though a sponge was found in her abdomen the morning after. Dr. Elder told me in France, at the base Hospital in Boulogne, that they had to revert to the Listerine Anti-Septic methods again, as A-septic measures did not seem to work as well.

In those days, we had no X-ray to help us with our dislocations and fractures, to aid us in our chest examinations, or our adbominal investigations. The microscope was in use, but not to the extent that it is now, on account of its limitations.

Koch's Bacillus was undiscovered, and differential blood counts were not practised. Instruments of precision, as the Sphygmometer, the Cardiograph or for making Metabolic tests, were unknown. There was no Provincial Laboratory. The possibilities of the Appendix, as a remunerative field for operations, were undiscovered. The same may be said regarding Tonsils and Adenoids.

Of course, we had the Tonsillotome, and when the child or adult had abnormally large Tonsils, they were sliced off, as far as possible, thus remove-the obstruction to the breathing.

Septic tonsils were not recognized. We did not hear anything about focal infections in those days.

To sufferers from bladder troubles, due either to an enlarged prostate or to stone in the bladder, the best that the ordinary man could offer was the catheter either with or without irrigations.

The operation of supra-pubic cystotomy, which is associated with the name of P. J. Freyer, was at that time unknown. If a stone was removed, it was usually by the Perineal route.

The graduates of that day, prior to their graduation, had never seen an abdomen opened, or seen an appendix operation.

My first experience in that line was with a patient of mine, in 1897, when with no other knowledge of the disease beyond what I had read, I performed my first operation, which consisted in draining an appendicular abscess, and then getting out as quickly as possible.

The patient managed to live. If I had attempted to do more I would probably have lost her.

Notwithstanding the fact that the practitioners of these days were without the aids of these modern times, they were capable of doing excellent work, and could give valuable pointers to our present day graduates in the way of conducting an examination.

In 1883, the outlook for those suffering from consumption (as it was then termed), was very different from the present day.

A diagnosis was usually first made when the physical signs were unmistakable, when they were accompanied with a temperature—the second stage of the disease, as it is now understood.

If a physician made such a diagnosis he would hesitate to impart it to his patient, as it usually meant only one thing.

Consumption was then considered hereditary, not contagious. Consequently, as a rule precautionary measures were not taken.

As the bureau of Vital Statistics had not been established, we had no knowledge of the percentage of deaths, but it must have been very high.

In the field of obstetrics, at that time, the practice of pre-natal care was not taught, or practised to any extent, and expectant mothers were not advised as to its importance.

Outside of vaccination, any of the anti-toxins were unknown, and diphtheria was a most dreaded disease, and when epidemic, often carried off whole families.

I might go on with these comparisons, as between present-day practice and those of 1883, but I forbear, as I have unduly taxed your patience.

What with the telephone, motor cars, better roads, hospitals within easy reach, the life of the practitioner of the present-day is made much more easy, more satisfactory as to his work, and less trying to his constitution, as compared with his brethren of former days.

But I must not close without some reference to our local Society. The Valley Medical Society, was organized in 1907. A very active Society was in existence in Lunenburg-Queens, and a couple of its members, the late Dr. W. H. MacDonald and Dr. F. S. L. Ford (now Col. Ford, C.M.G.) kindly came through to give it a boost.

The company I see before me is a vastly different one from that which met in The Spa Hotel in Middleton in 1907. Drs. Miller, Morse, Burns and myself alone remain members of the Society. Dr. W. F. Read, who was our faithful Secretary for a number of years, is now in New York State, acting as Medical Advisor to Colgate University. Dr. W. B. Moore is still very much alive, but he has retired from practice, and is now living abroad, and enjoying a well earned rest. When here he never missed a meeting, and his presence always tended to enliven the proceedings.

In closing I desire to thank you for your patience, and attention and if in any way I have shown the contrast in conditions as they existed in 1883 with those of the present day, my objective has been attained.

Halifax Medical School— In Mission Lands

MANY of the graduates in Medicine from our Canadian Medical Colleges find themselves carried far afield in response to the needs of the world, and our Medical School at Halifax is no exception. One of those who has brought great credit to herself and the agencies responsible for her training is Dr. Jemima MacKenzie, M.D.,C.M., a graduate of the Class of 1904 Dalhousie University.

She was born in Cariboo, Pictou County, N. S., and in the year of her graduation went to India under the Woman's Union Missionary Society of America, and on arrival in India was placed in control of the Merriam Orphanage with 125 girls and with only a month's acquaintance with the language, and later the Medical work and the School were assigned to her. In the last quarter of a century she has rendered magnificent service to all the Medical Missionary work throughout India, serving in many capacities where initiative and consecrated leadership were required, and is still at her life work in that great land. The following in a private letter from Dr. MacKenzie, written to a friend some time ago, gives an idea of the conditions she found on arrival in India.

Extracts from Letter of Dr. Jemima MacKenzie, Graduate of the Class of 1904 Dalhousie University.

"The call came one busy day in 1905 while I was in charge of an Orphanage of 125 children and in general Medical practice at Cawnpore, India. It was to see a wealthy Hindoo widow, who had fled from Cawnpore to a village on the bank of the Jumna River sixty miles from Cawnpore to escape plague. There was only time to get some medicines together and catch an outgoing train three miles away, that took me twenty miles nearer my destination. Here at a small country station, I found a little road-cart waiting for me, and drove eight miles in the dark to a wayside bungalow, such as you find to accommodate travellers in many parts of British India. There I met a fellow missionary and her Indian Bible woman. At sunrise the next morning we started on road-carts, passed many small towns, and by four p.m. reached a large village where we halted for food. While it was being prepared we visited the village. It was like many other Indian villages, a cluster of mud houses, with thatched roofs and irregular lanes near a canal or stream. The small door answered for all purposes.

Ine one of these a baby, burning with malarial fever, lay moaning on the mud floor, while the worn out mother sat in despair a little distance from it, waiting for its death. We bathed the little wasted form and gave the quinine and diaphoretics needed to reduce the fever and left it soothed and sleeping in its mother's arms, while we told her about the Good Shepherd who careth for His sheep and carries the lambs in His bosom.

The next house we entered—they have no word for home—an old woman with soft brown eyes, and snowy hair, held her hands up to us appealingly, as in token of prayer. Her face was partly eaten away by disease. We showed her how to cleanse and care for it and left her the medicine she needed, and later had the joy of learning that she recovered. From house to house we went and everywhere disease, in one or other of its loathsome forms was their guest. As darkness deepened we called the village to see the magic lantern pictures of our Lord's life and told them the old yet to them new story of God's redeeming love and power. He alone gives the abundant life whereby India can learn to serve those for whom He died and rose again triumphant over pain and death.

The next morning we started again. This time by ox-cart and found places where the road had to be cut out for us. The last part of it lay over burning desert sands and we were glad at sunset to see the blue waters of the Jumna and to camp under a few tall palm trees near the bank. Here we heard that fifty priests anticipating our visit, had arrived, lest the widow hearing the Gospel should accept it and turn her back on the innumerable gods of Hinduism. She feared for our safety and told us to eat only such food as she sent by one of her trusted servants. Her head steward was the typical unscrupulous person one does not care to meet, and years later this poor widow met death at his hands.

She had sent to the city for draperies of delicate shades of yellow and white and had covered the mud walls and floors with it in honour of our visit. She was one of the few Indian women who can read and I gave her a Bible which she eagerly accepted, and gladly she heard the story of our Saviour's love. While I treated her my co-worker spent her time singing our beautiful Christian hymns to the priests in their own language who had arranged themselves in the courtyard near the curtained verandah where the widow received us. We visited her twice daily while we were there. The other hours of the day we spent visiting the sick in the village and caring for those brought on cots or carried on the backs of their friends and laid at our tent door.

One night we went to a village on the opposite bank and five miles further down the stream where they had never seen a white face. The people were afraid and the men met us with clubs, thinking we were bringing plague or famine, but after hearing the good news in picture, hymn and story, they asked us to forgive them and to come again. The next night we went up the river to a village perched high up on a cliff. Patients had come to our tent from here and they had prepared a supper for us in the moonlight under a spreading tree. After their sick were seen, the whole village gathered to hear the Gospel, the women on one side of the curtain, as the purda custom is and the men on the other. When we were leaving, the women with tears in their eyes begged us to come back again.

I have only given you a glance at the need of both soul and body in a few among the thousands of villages in that district of nearly a million people. At that time there was no Medical work of any kind for its women and children within a radius of fifty miles. I could not forget them, and when my sister Dr. Mary MacKenzie, '05, came to India and took over my work at Cawnpore, the Woman's Union Mission of America gave me permission to open Medical work with Fatehpur as a center for that District.

A friend from America gave eight hundred dollars and while our brick building was being erected we opened a daily clinic in a small mud house on the premises. For the last year the work had to be carried on with funds received from visits to the homes of those who could pay. The second year the Board gave us an allowance of twenty-five dollars a month for medicines. The poor, or those who could pay it were charged two cents for their first examination and treatment card. This prevented them from losing them and facilitated our work in the clinic. When our new Dispensary opened the numbers rapidly increased to more than one hundred per day. Then we rented on perpetual lease twelve acres of land, between the city and railway station and with a gift of ten thousand dollars built the Broadwell Memorial Hospital with accommodation for fifty beds and operating suite. Later with gifts and money received from the out practice we removed the out-door department from the city to the Hospital grounds, and built a Nurses' Home, private wards, kitchen, garage, etc. At times the Hospital was so full that we had to use our wide twelve foot verandahs as well. Friends in America came to our aid with funds to permanently endow thirty-three beds and support a number of others by the year as well as give scholarships for nurses and Bible women, compounders, and the doctors support. Best of all in 1910 the Master sent us Dr. Grace Spencer of Halifax, who took a keen interest in the medical work and gave herself whole heartedly to the uplift of the women and children. She was one of those choice, beautiful characters who never thought of self but gave her all for India. During the five years she was with us, we opened up seven weekly dispensaries in distant parts of our district. During the first year these had to be carried on by rail and road-cart and it meant leaving early and returning late. Later we got a motor car, partly bought by acting as ship's doctor on my return from furlough, and I built a dispensary at Jahanabad thirty-five miles from Fatehpur in memory of my mother Anne Murray, and in addition to our

central work kept open two others, one forty miles distant and the other thirty-three miles from our central station till I came home on furlough in 1921.

We had to deal with many epidemics of cholera, plague, smallpox on a large scale and with all the general diseases we have at home, while malaria was our constant companion and leprosy a frequent visitor.

The operative work included eye work and general surgery and often had to be done with a very inadequate staff. Indian women assistants are scarce and generally the anaesthesia had to be supervised as well as the operation performed with an Indian nurse for an assistant. With lack of foreign nursing superintendents the preparation and after care of the patient during critical cases also fell to the doctor in charge.

Child marriage and osteomalacia complicated the maternity work, and the large majority of cases to which we were called or which came to the Hospital were operative. Our out practice covered a radius of fifty miles and we were liable to calls night and day. During one of the Influenza epidemics out of seventeen nights I was called out fourteen between midnight and the morning hours. Yet with it all there was a great joy in caring for the body and in giving the good news of Redeeming love and the more abundant life to the soul, for we cannot separate the two. When on furlough in '21 two women doctors were found who went out to carry on this work. When I was free to return to India, the Presbyterian Church of Canada urged me to join their depleted staff in Central India where I have worked since among our five Womens' Hospitals there, now under the United Church of Canada. Neemuch, C. I. is now my field of work, a Hospital of fifty beds, with a large surrounding district, and the medical care of a Babys' Home and Girls' School. Sickness and retirement his again depleted our mission medical staff and one of our Hospitals has been without a Canadian doctor for nearly two years. Who will hear and heed the Master's voice saying "Go and give the good news to every creature" and "Lo, I am with you always even to the end of the age." The Gospel must first be preached as a witness to all nations before the return of our King to usher in the Golden Age. Why do we delay in calling back our King?"

Registrations in the Faculty of Medicine at Dalhousie University have closed and a tabulation of results show that the first year class is the largest in the history of the Medical School.

As compared with last year's entering class, the enrolment of the present class is approximately forty per cent. greater. Out of a total enrolment of fifty-five students, thirty-nine completed their pre-medical education at Dalhousie, fourteen at other colleges and universities situated in the Maritime Provinces and Newfoundland, including Acadia, Mt. Allison, St. Francis Xavier, and Memorial College at St. John's Newfoundland, while the remaining two students were admitted as graduates of Tuft's College, Medford, Mass., and Colby College, Maine. It is also of interest to note that there is an increase of twelve students from the Maritime Provinces as compared with last year's class. During the past few years the number of women medical students has steadily decreased in most medical schools, and following this trend, Dalhousie shows one lone registration of a woman student.

While the minimum requirements for admission are two years of pre-medical work at an approved college or university, the records of this year's class show that nearly two thirds of the students have had three or more years of college training, and several possess a Bachelor's degree.

CASE REPORTS

Argas Reflexus. The Dove Tick.

A FEW years ago I was called to see a lady who was greatly disturbed by a widespread skin affection. It came on during the night and was extremely itchy. The lesions were scattered all over the body and consisted of small erythematous spots with a minute haemorrhagic area in the centre. They looked like the lesions of pediculi but one would hardly expect these insects in this particular home which was immaculately clean. On investigation I found a large number of very active insects in the bed. They were darker in color and smaller in size than the ordinary louse and I concluded that they were not the common variety. A few prisoners were incarcerated in a hypodermic vial and conveyed to the laboratory. The task of identification was assigned to Dr. W. M. Chase, then a final year medical student and now pathologist to the Royal Victoria Hospital. After searching in vain in many books he at last found a description of the dove tick or pigeon louse which tallied with our specimens. These insects Argas reflexus, belong to the mite group; they have four pairs of legs in contrast to the pediculi which have only three. They are parasites on the common pigeon and it was found that these birds were regular visitors to the eaves of this home. They occasionally invade a home in large numbers, viciously attack human beings, producing the lesions above described. As they leave in a short time of their own accord no special methods of extermination are necessary. It is possible that these invasions are more common than is generally known and it was only a little curiosity which led in this instance to a correct diagnosis.

K. A. MacKenzie

Acute Mercury Poisoning.

Mercuric chloride is the poison most commonly used in this country for suicidal intent and not uncommonly it is taken in mistake for some harmless tablet. The life of the patient is saved by quick action on the part of the physician and it is of some interest to refresh ourselves on the best method of treatment. The two following cases have some points of interest.

1. A young man, age 19 complained of headache and swallowed two tablets of bichloride of mercury, given by a friend in mistake for aspirin. The error was recognized at once, and he rushed to a drug store. The druggist sent him at once to Dr. Lewis Thomas, who acted with great speed, washed out his stomach very thoroughly, and gave him white of egg. This procedure undoubtedly saved the man's life. He was then sent to the Victoria General Hospital. He appeared to be in good condition and complained of slight burning pain over the sternum and in the epigastric region. He was given 20 grs. of Sodium Thiosulphate at once and this was repeated in three hours. The following morning he was feeling better and free from discomfort. During three days of observation he had no complaints, urine showed no sign of renal disease and the mouth appeared to be free from inflammation. The blood

urea was slightly raised, 46 mgms. per 100 cc., and a trace of mercury was found in the urine. He returned in three days and showed no signs of renal involvement or gingivitis and it was considered that he was quite safe. He is now quite well.

2. A young woman age 31, suffering from a mild psychosis took 12 tablets of bichloride of mercury with suicidal intent on Jan. 15th. Within five minutes she was given mustard and water which induced vomiting. Dr. Rupert Hawkins was on the scene in about twenty minutes, gave her white of egg and washed out the stomach thoroughly. Five hours later she was admitted to the Halifax Infirmary. She was very ill, vomited frequently and had frequent profuse bloody stools which persisted for many days. She became very restless, sleepless, and complained of numbness in her limbs, headache and twitchings. Fluids were given by mouth and rectum; bismuth and starch and laudanum enemata were used to control vomiting and diarrhoea. On the third day the vomiting still persisted, teeth ached, pulse became rapid and weak and it was noted that she was passing very little urine. Albumen, blood and casts were reported. It was obvious that her kidneys were badly hit and her mouth showed a severe grade of mercurial stomatitis. For a period of nine days not more than a few drams of urine were obtained by catheter and she became much worse. There was general oedema, delirium, persistent vomiting. The blood pressure was rising and the blood chemistry showed increased nitrogenous retention. On three consecutive observations the Urea Nitrogen was 137,178 and 200 and the creatinine 5.3, 7.3 and 11 mgms. per 100 cc. For several days it looked as though she could not recover. Treatment for the anuria consisted of hot packs to the back, colon irrigations, intravenous injections of saline with glucose and Fischer's solution, Murphy drip and bleeding. Hot air packs with small doses of pilocarpine were used to promote diaphoresis. Antiseptic mouth washes were used for the stomatitis. On the tenth day the kidneys began to function and the amount of urine increased daily. At the same time there was obvious improvement in the general features. Blood chemistry fell and we felt that she had turned the corner. In two weeks she was allowed to go home. Several weeks later all her teeth were extracted. They were loose and the alveolar border was separated from the jaw, several teeth coming out in mass. She made a good recovery and was able to resume her work. This happened in 1927 and she is in good health to-day. This case presents several points of interest.

1. The unusual dose, approximately 86 grains of mercuric chloride.

2. Her life was saved in the first instance by prompt action on the part of her physician Dr. Rupert Hawkins and in the second place by persistent efforts to re-establish kidney function.

3. The period of almost complete anuria with recovery is unusual.

4. The creatinine reading of 11 mgms per 100 cc. is far above the point which is consistent with recovery. In several references a reading of 5 mgms is taken as indicating a fatal termination.

5. The marked effect of the poison on the kidneys and the stomatitis with necrosis of the bone was true to form.

6. The recovery of the patient.

Summary or treatment for acute mercurial poisoning.

1. White of four eggs with a pint of milk.

2. Gastric lavage. Use a saturated solution of sodium bicarbonate; repeat until washings are clear and give ounce of epsom salts before stomach tube is removed.

3. Colonic irrigation repeated twice daily.

4. Sodium thiosulphate. This is a recent remedy which has not found its way into the text books. It may be given in doses of twenty to thirty grains repeated every hour or two for several doses. It is a chemical antidote producing an innocuous compound which is eventually thrown off by the bowels, skin and kidneys. It is said to counteract the poison in tissues as well as the stomach, but this point is not definitely proven.

5. If possible Fischer's solution may be given intravenously but if this is not available normal saline may be used.

6. If anuria develops the following measures are useful:—hot applications to the back, hot packs, Murphy drip, bleeding, repeated colonic irrigations and intravenous saline or Fischer's solution.

7. Watch patient for ten days for signs of late poisoning.

8. Symptomatic remedies. Bismuth for vomiting. Warmth for shock, morphine for pain, starch and laudanum enemata for diarrhoea.

9. Alkaline drinks, potassium tartrate or sodium citrate may be added to orangeade or lemonade and given frequently. A milk diet until it is felt safe to give a more liberal diet.

K. A. MacKenzie

General Paresis.

Mr. J. B.—Age 62—Unemployed labourer.

Admitted to Dr. MacKenzie's service August 29th, 1933.

Complaints—Falling attacks, Headache, Pain and tenderness of abdomen and legs.

Family history—negative.

Personal history—Diphtheria about thirty years ago with good recovery. Street car accident twenty-six years ago, head and leg being injured. Six years ago he was laid up at home with marked loss of energy, aching and bewildered feeling in his head, dizziness, and weakness of the legs. After seven week's rest he was apparently quite recovered, and has remained so, he states, until one month ago. Was never in hospital before this present admission.

Present illness—One month ago he suffered the first falling attack. It was preceded by nausea, a choking sensation and coughing. He fell to the ground, but was not unconscious, and arose immediately. A similar attack occurred a few days later.

During this past month he has had pain and soreness in the abdomen and legs, at times quite sharp pain. Also headache accompanied by a feeling of bewilderment.

He estimates that he has lost weight to the extent of twenty pounds during the last four weeks.

His wife reports that during the past month he has seemed dull at times and apt to lose his grasp of the conversation, both his own and that of others; and that he has partly lost interest in other people, tending to stay by himself.

Physical examination—White male of good development and nutrition, fair colour. Appearance corresponds to stated age. Mouth and teeth in fair condition, but there is some dental caries. A few small palpable cervical glands were noted.

Respiratory system—An area of impaired resonance at left base with prolonged expiration. No rales or rhonchi were heard.

Cardio-vascular system—No abnormality found. B. P. Systolic 128. Diastolic 84.

Abdomen—moves freely with respiration—no rigidity—no tenderness.

Extremities—brownish discolouration of skin and moderate varicosity of veins in the region of both ankles.

Nervous system—intelligence fair—he is illiterate—attention and memory fair—no judgment defects noted; no delusions; no speech defects, except that he has slightly more than the normal difficulty with "tongue twisters". No facial or other tremor.

Cranial nerves—no abnormalities except that on one day inequality of the pupils was seen. His vision is failing. His pupils react both to light and accommodation, though perhaps somewhat sluggishly. Fundi normal.

Motor functions—normal except that there is a moderate generalized weakness.

Sensory function—normal when tested for touch, pain, heat and cold.

Reflexes—superficial, deep and special are all normal.

Cerebellar function—normal.

Laboratory findings—Urine—no abnormalities found.

Blood—R. B. C. 4,510,000—Hb. 80%—W. B. C. 9,200.
Kahn—Positive (four plus).
C. S. Fluid—clear—increased pressure, cell count—170.
Red cells—a rare cell.
Globulin—increased.
Copper reduction—normal.
Chlorides—0.68%.
Lange Curve—5555543221.
Kahn test—Positive (four plus).

He remained in the ward for thirty-one days. During the first ten days, while at rest, the pain and soreness in his abdomen and legs disappeared and did not return. On September 13th one of his falling attacks was observed. While talking to the attending physician his speech suddenly became confused, he paled and staggered and began falling, but was caught when half down. He did not become unconscious and in a moment was able to converse again. At no time did his conduct or conversation show anything which would warrant his commitment as an insane person. The diagnosis of General Paresis was made on the cerebro-spinal fluid findings together with the epileptiform seizures and the history of slight transient mental confusion, and slight changes in his disposition.

On September 30th he was transferred to the Nova Scotia Hospital as a voluntary patient, in order to have malarial treatment carried out.

This case is reported as being of special interest because of the possibly somewhat slender, but we think, sufficient grounds for the diagnosis, and because of the paucity of the mental symptoms.

J. R. CORSTON

TUBERCULOUS MENINGITIS.

R. L. was admitted to Hospital October 3rd, 1933.

He was always considered a healthy if not a robust boy; though for a few days prior to the onset of his present illness, it was learnt by careful questioning that he lacked his usual vigor and energy and was inclined to lie around more than his wont, even on two or three occasions asking to be put to bed during the day, an unheard of thing. Nevertheless he was not noticeably ill in any way; nor was any change noticed in his behaviour or mental reactions; he was not irritable or emotional.

Ten to twelve days previous to admission, while sitting in a chair, he suddenly fell off it in a convulsion, which lasted four hours, without intermission, though with considerable variation in severity. It seemed reasonably certain that the convulsion commenced before the child fell; and the fall produced no evident signs of injury.

Since the onset the child has had frequent convulsive seizures, at varying intervals and all degrees of severity, some lasting a few minutes, some hours. The attacks it was noted, started with twitchings of the facial muscles on the left side, spreading to the arms and soon became generalized, but almost always began on, and were more pronounced on the left side of the body,—face, left arm and left lower extremity. Between the seizures the child was dull; spoke very little, ate very little, but was not comatose and had no specific complaints.

Vomiting was not severe, but was fairly frequent and usually occurred after eating or drinking; the bowels were stubbornly constipated in spite of the free exhibition of laxatives. The child was feverish, more so in the latter part of the day, but never seemed to have a high fever.

On admission the complaints given were: convulsions, fever and apathy. Temperature 101; pulse 80-100, respirations 28-30.

A rather pale four year old boy, poorly nourished, fairly well developed, lying in dorsal decubitus, apparently sleeping, but could be momentarily aroused to answer simple questions, was not irritable, slight photophobia. Occasional convulsive movements of the facial muscles; at times for several minutes rhythmic flexion and extension of the left lower extremity at the hip and knee, and less frequently a tendency to similar motions of the left arm at the elbow. At other times there were generalized convulsive movements.

Examination of nose, mouth, ears, heart and lungs was negative, except for dry scaly excoriations of the lips. The abdomen was slightly concaved, and showed no tenderness, no masses, no rigidity and the liver, spleen and kidneys were not palpable. Bones and joints were normal. Leucocytes

25,000. Urinalyses were normal. The Nervous System examination showed drowsiness and convulsions as above noted. No delirium. Pupils were equal and fairly active; no ptosis, internal strabismus, first in one eye and then in the other was seen at times; movements of the tongue apparently normal; no dysphagia. No head retraction, neck definitely stiff, flexion causing pain. Brudzinski's sign doubtful; Kernig's sign negative; slight spasticity. Fine tremor of hands on movement. The tendon reflexes were rather brisker than normal, usually more so on the left side; the epigastrics, the abdominals and the cremasterics were absent on both sides; and at times Babinski's sign was positive on the left side. Lumbar puncture was done; the fluid was clear and under slight pressure. The laboratory examination showed: appearance clear; cell count 95; globulin increased; copper reduction, not reduced; chlorides 0.62%; Khan test negative; red blood cells, an occasional cell; spinal fluid curve 2222211000.

X-ray examination of the skull by single film did not show any evidence of fracture, or other abnormality. The fundi oculorum showed some engorgement of the veins, nerves very hazy and outlines indistinct; suggesting increased intracranial pressure. Re-examination of the eyes' grounds about twelve days later showed similar findings but more pronounced in the right eye.

The child's condition, as regards convulsions, temperature, drowsiness and decubitus, etc., remained much about the same during the two weeks following admission, except for a rising pulse rate. After this, in the four days before death, the convulsions gradually ceased, the spasticity passed off and the child became quite flaccid, except the left arm which remained tightly flexed at the elbow, in spite of frequent massage and passive motion; the drowsiness deepened into true coma and the temperature began to fall and seventeen days after admission, twenty-seven to thirty days after the first convulsion, the child died.

Diagnosis. As so often is the case "hindsight" robs this case of some of its interest, but at the time it presented several diagnostic possibilities and for a time was rather perplexing.

On account of the history of the fall, the vomiting, the early onset of optic neuritis, more marked on the right side, the repeated convulsions, starting on the left face and spreading first over the left side of the body before becoming generalized, the increased tendon reflexes and the positive Babinski on the left, with a paucity of definite meningeal signs, a right sided tumour of the brain, hemorrhage, abscess or neoplasm—was strongly suggested.

The peculiar drowsiness, lack of irritability, intermittent paresis of the eye muscles, and the few signs of meningitis, somewhat suggested encephalitis lethargica; other forms of encephalitis were not considered because of the absence of a history of mumps, measles, etc. Tuberculosis, by far the commonest brain affection at this age, was questioned because of the sudden onset with convulsions and their prolonged persistence, the absence of the characteristic stage of meningeal irritation, the atypical drowsiness, the delayed coma, the absence of lateral decubitus, sighing respirations, and definite signs of meningitis. The spinal fluid, especially considering the absence of sugar and the reduction of the chloride content, strongly favoured tuberculosis: this supposition was supported by a little extra-mural investigation, by which a definite tuberculosis contact was unearthed. The child had been in the habit of frequently visiting and playing with the children of a family wherein were several cases of open and active tuberculosis.

Post Mortem showed a very typical case of tuberculous meningitis, with much matting at the base of the brain and well developed internal hydrocephalus. There was no generalized miliary tuberculosis, but numerous mesenteric glands were enlarged, with minute caseous nodules showing on section. Also there were some tuberculous tracheobronchial glands and one lung contained an old small apical cavitation. This last, is an interesting fact, as it supports the theory held by so many to-day that tuberculosis usually starts in childhood and always starts as a small lung lesion, which may or may not heal, but which always infects the tracheobronchial glands, and later the mesenteric glands, bones, blood stream, etc. Certainly in this case the oldest and most far advanced lesion was in the parenchyma of the lung. This case of tuberculous meningitis is presented because it was so unusually atypical in most of its aspects.

M. J. CARNEY.

From the Medical Service of Dr. M. J. Carney of the Halifax Children's Hospital, Halifax.

Addison's Disease.

DR. M. H. CARNEY'S Service.

C. D. Male—aged 49—Farmer.

He was admitted to the Victoria General Hospital on November 5th, 1931, complaining of lumps in the right inguinal region. These lumps had been present since January of the same year and came on, he thought, as the result of a long hike. It was thought they were tuberculous in origin—but a biopsy showed only a sub-acute inflammatory hyperplasia.

The patient was a white male of French extraction but it was noticed that his skin was much darker in colour than ordinary and on questioning him it was found that for some years he noticed that his skin was becoming darker and this fact was apparent to his friends.

On examination there was a definite generalized dark brownish pigmentation of the skin which was more concentrated on the genitalia, nipples, neck and arms. There was not great loss in weight—no gastro-intestinal symptoms. Examination of the lungs showed old apical tuberculous infiltration, but no evidence of active disease. The cardiovascular system showed no organic disease. Blood Pressure 134-94. The central nervous system showed no pathology. The blood picture revealed a moderate secondary anaemia. X-ray examination and cystoscopic investigation of the kidneys showed nothing abnormal. The Kahn test was negative. The blood chemistry including cholesterol, sugar and sugar tolerance tests were normal—though the latter did suggest a mild diabetes—sugar was not found in the urine, though there were traces of acetone present in the urine from time to time. The stools showed a slight positive reaction for Occult Blood from the Gregerson test. The urine was negative for indican.

Though many of the characteristic features were absent—it was felt that this man was suffering from Addison's Disease. He was advised to return home and rest and report for further treatment in six month's time.

He was re-admitted in February, 1932. At this time there was not noted any gross change in his general physical condition. The pigmentation was darker—he has lost about ten pounds in weight, and he volunteered the statement that he was unable now to do any heavy work around the farm and that even short walks fatigued him greatly. His blood pressure dropped to 84/64. There were no gastro-intestinal symptoms.

He was given Adrenalin Chloride (1-1000 sol.) sub-cutaneously twice daily for three weeks, but there was no improvement. He was then given supra-renal (cortex) powders in pill form, three times daily and at the end of a week said he was improved. He was discharged from Hospital on this treatment on April 18th, 1932.

When seen again early in the summer—the patient presented practically the same appearance as during the Spring of 1932. The pigmentation was more generalized, all over the body, giving him a negroid appearance. The blood pressure was 78 systolic, and the diastolic could not be estimated. The least exertion fatigued him greatly though short walks could be undertaken without any embarrassment—and there were times when he could do the ordinary chores around the house.

He has been taking the supra-renal tablets since discharge from Hospital—and says when they are omitted he feels weak, languid and unable to do even the ordinary things he is accustomed to do without experiencing great difficulty.

Diagnosis—Addison's Disease.

G. R. BURNS

Chronic Nephritis with Uraemia.

Male—aged 24—letter carrier.

I first saw the patient on the evening of July 17th, 1932. That day he had suddenly lost his vision and had become mentally confused. Family history unimportant. Patient had the ordinary diseases of childhood, and Influenza in 1918. Two years ago when examined for the Service was told that he should restrict meat in his diet. Patient had always enjoyed excellent health and was able to perform his duties even on the day previous. For some months he had noticed a tendency to fatigue but attributed this to the strenuous delivery route allotted him. One month ago his vision began to fail and there was a burning sensation in the eyes. Patient did not consult a physician, but used boric acid eye-wash. There was no history of headache, vomiting, dyspnoea, and only occasional nocturia. During the morning of July 17th he became totally blind and mentally confused. Examination of the patient verified these symptoms. Patient was well nourished and well developed, but had a pale sallow colour; ammoniacal breath; no oedema; heart-rate 100, rhythm regular, marked enlargement, diffuse heaving apex-beat and a loud harsh systolic murmur audible all over the praecordium, pulse of high tension and mild arterioscleriosis. Blood pressure 250/130. Reflexes all present and apparently normal; opthalmoscopic examination revealed an extreme degree of albuminuric retinitis with marked papilloedema. Urine—

spec. grav. 1010, sugar negative, albumin three plus, granular and epithelial casts, a few pus cells and red blood cells.

Patient was sent immediately to the Victoria General Hospital. Fifteen minutes after admission he had a convulsion, tonic and clonic in type, lasting three minutes, and followed shortly afterwards by another similar seizure. Thaemoglobin 75%. R. B. C. count 4,750,000. Lumbar puncture was performed and 8 c.c. of c.s. fluid withdrawn. Owing to difficulty in keeping patient quiet it was impossible to use the spinalmanometer, but the fluid did not appear to be under great pressure. Venesection was done and thirty ounces of blood removed, which was replaced immediately by twenty ounces of normal saline intravenously. Following the venesection the blood pressure had fallen to 150/90.

Patient's condition improved though he was irrational and very restless. He was given two ounces of magnesium sulphate followed by a s.s. enema with good results. The mental state was controlled by hyoscine hydrobromide grain 1-100, followed by nembutal grains three.

The following day patient was conscious and fairly rational though still completely blind. Three mild convulsions occurred. Blood N. P. N.—99.8; B. U. N. 46.6. Kahn test negative. Cerebro-spinal fluid was normal. The patient was given fluids by mouth frequently and in fairly large quantities. He remained in hospital until July 25th during which time his condition rapidly improved; vision cleared markedly and on discharge patient could read large type. Diet was a low protein salt-free one, chiefly in liquid and soft solid form. Insomnia was troublesome but overcome by means of chloral hydrate, bromides, and luminal. Blood picture on discharge Hb. 65%, R. B. C. 4,360,000, W. B. C. 15,000.

At home patient was kept in bed for two months on a low protein diet (thirty-two or thirty-six grams protein daily). Blood pressure ranged from 270/150 to 196/120 in spite of bed-rest and various drugs. Urine showed constant findings typical of chronic nephritis. The vision improved so that patient was able to read small print. Headache and vomiting were absent.

On November 19th patient had a dizzy turn followed by two convulsions and uraemic coma. He was admitted to hospital at once where with the exception of lumbar puncture, similar measures as outlined above were instituted. A prompt return to consciousness occurred and a few days later patient left the hospital. His subsequent course was gradually down hill. He suffered considerably from pains in the shoulders and abdomen, and constipation was troublesome. Headache and vomiting were still absent. Congestive cardiac failure appeared in January, 1933, and responded well to digitalis and rest, but recurred early in February and on this occasion digitalis therapy was of no avail, patient dying suddenly on February 24th.

Interesting features of the case. 1. Absence of symptoms prior to the visual disturbance, in spite of the advanced degree of the disease. 2. The marked hypertension and retinitis at such a young age. 3. The prompt response of the uraemic convulsion to venesection and forced fluids (diaphoresis was not employed). 4. The return of the vision to almost normal. 5. The length of time between the onset of uraemia and death of the patient.

C. W. HOLLAND.

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IT is a leading aim and purpose of the BULLETIN to keep before the minds of its readers all matters of importance that, directly or indirectly, have a bearing on the interests and the welfare of the Medical Profession. And not the least important of these considerations is that of Preventive Medicine. For a long period in our history the doctor's work was regarded as being mainly concerned with the diagnosis of existing disease, either in acute or chronic form, and then effecting its cure or, at least, its alleviation. But while very commendable progress has been made during the past fifty years in the methods employed to accomplish these desirable objects yet the results have not been as gratifying to either patient or medical attendant, as was expected. Too frequently, failure in the ultimate purpose to achieve complete recovery to health is a source of disappointment to both interested parties. In many cases the explanation is that irreparable damage was done to delicate bodily structures before the patient's suspicions were aroused as to the possibility of any insidious invasion, and long before the physician's attention was called to the probability of an existing abnormality. The sound teaching to-day of the Principles of Medicine, and the improved facilities (generally available) for the examination of patients are certainly conducive, at the present time, to correct diagnosis and appropriate treatment. But too often we are asked to diagnose the disease process only after it has caused the damage above referred to, whereas what we should do is to study predisposing causes and organize resistance so that infection shall not produce clinical disease. An ounce of prevention is worth more than a pound of cure! Hence the concern of the profession, both in its own interests and in those of its clientele, to insist on the prevention of disease even more than on its cure. A periodic medical examination of men, women and children every six months, together with a certificate as to the physical and mental condition ascertained at that date, would do more to safeguard the public health of the people than any other service—social or otherwise—that could be devised. We venture the prediction that the great work of Medical Practice in the future shall be such exhaustive systematic examinations as shall determine the existence of a proper co-relation between a constant internal bodily arrangement and a varying external environment.

Nor would the profession, in this way, be killing the goose that lays the golden egg. A leisurely and continuous service of this kind would be exceedingly pleasurable to the general practitioner, as well as to the specialist to whom the former would refer special cases; while the sum total in emolument would be fully equal to that derived from professional attendance at seasons of stress and strain when payments might be hard, if not impossible, to make.

The question is one that is engaging the attention of Medical Schools in many countries at the present time; and they are considering, with much gravity, what can be done to introduce the preventive aspects of Medicine into the curriculum. So the BULLETIN takes this opportunity of sounding a note of warning as to indications of a trend in the practice of our profession that is being more strongly emphasized than ever, and that medical men should strive in their humanitarian work to increase happiness in a world that is unnecessarily suffering from preventible illnesses.

M. D. M.

Continuing its effort to make The BULLETIN of maximum use to our members we inaugurate with this issue another section—The Laboratory Section. The aim will be to show clinical conditions in which laboratory tests are helpful or necessary and from the maze of tests possible to employ, to indicate those which are more generally applicable, and also to make known the interpretation thereof. Professor Ralph P. Smith has kindly undertaken to sponsor this section and the series will cover many issues. We believe they will be found to be a valuable series.

N. H. G.

CORRESPONDENCE

Post Office Box 27,
Old Bridgeport, Nova Scotia,
September 27/33.

H. B. Atlee, M.D.,
Chairman, Refresher Course Committee,
Halifax, N. S.

Dear Dr. Atlee:—

I thought perhaps this cheque might help meet the expenses of the Refresher Course.

I would like to visit the Hospital again some time.

Yours very truly,

(Sgd.) F. T. DENSMORE.

(Dr. Densmore sent a cheque for $25.00.)

CANCER

THE PATIENT WITH CARCINOMA OF THE STOMACH

UNDER this caption Maes in the *American Journal of Cancer*, considers the various phases of gastric malignancy. The incidence of carcinoma of the stomach is increasing, like the incidence of all malignant disease, and the increment cannot be explained away on the basis of a longer life expectancy. He complains that we are not finding the improvement in the curability of the condition that we might reasonably expect to find in the light of improvement in diagnosis and treatment. Of every one hundred patients with the disease at least fifty, when they are first seen, have advanced to the point where no surgery can help them, and not more than twenty-five of the remaining fifty can be considered as subjects for gastrectomy—the only procedure which offers hope of permanent cure; and if ten of that twenty-five live beyond the five year period, the surgeon may count himself fortunate among men.

Men like Balfour, it is true, may report large series of cases of stomach resection alive and well after ten years, but the more typical figures are those of Walton who with two hundred and sixty-two treated cases, has only nine—less than 4%—that have survived long enough to be regarded as even probable cures. That however, included one hundred and seventy-one so far advanced that gastrectomy could not be considered, which makes the percentage of probable cures something like 10%, and if these could be further subdivided into early and late cases, the percentage of cases would undoubtedly be doubled or tripled. But the real and damning truth appears only when all cases are considered, and that is that surgery in the best hands is possible in not more than 25% at most, and that considerably less than half of that pitiful number survive for five years.

He holds that for this the much maligned medical profession does not deserve all the blame because we cannot treat persons who do not come to be treated nor operate upon them if they refuse to submit to it. But he does not let us off so easily, claiming rather, that most of the responsibility must still be laid at our door. He states that the average physician either forgets entirely that carcinoma of the stomach cannot be diagnosed by rule of thumb, or he tries to diagnose it by trial and error method, and that the tragic results of both courses are seen only too often.

There is absolutely nothing typical about it in its early and curable stage. When typical signs and symptoms develop, the patient is usually beyond hope of cure. Yet, he complains, there is scarcely a physician who does not look for typical findings, chiefly because they are the findings he has been taught to look for; and that we continue to show students, just as we were shown, terminal pictures rather than initial sketches.

In considering the method by which the initial curable stage may be recognized, it is suggested that we begin by reminding ourselves that the patient with carcinoma of the stomach is not necessarily the man or woman of middle life or beyond it, reminding us of Alvarez' statement that one out of every nine cases is under forty-five, and stresses the importance of remembering this because the activity of the lymphatic system in the young and the vascularity of their tissues makes every day of delay to count against them.

Reviewing other features of the condition he suggests two classes of patients. The first is that in which the patient has been well, up to the beginning of the present illness, and then the symptoms are very mild—a slight deviation from normal health, *in which there may be no gastric symptoms whatsoever.* He just doesn't feel well, concentrates poorly, doesn't sleep well, and tires quickly. There may be a general malaise, trifling loss of weight or a slight anaemia. What is our reaction to the presentation of such a picture? His suggestion is that presented by a young person, we promptly bring out the thermometer and the sputum bottle, while in the older person, nine times out of ten he is given a tonic and nothing more, whereas what he needs most of all is prompt X-ray examination of the gastro-intestinal tract. He admits that nine cases may prove it to be needless precaution, but in the tenth case which has nothing to distinguish it from the others, it may save a life.

His second class or type brings us into the realm of the controversial—the patient with a long story of previous indigestion which has, perhaps, responded well to previous medical treatment but which now either remains obdurate or which suddenly exhibits an exacerbation of symptoms or a change in them. He depicts such a patient as standing in the centre of the storm which rages over the question of the relation of gastric ulcer to gastric carcinoma. He takes cognizance of the work of eminent pathologists, such as Ewing who gives only 5% as having undergone the transition from ulcer to cancer, but cites MacCarty's contribution in which 70% was the proportion, Moynihan who reported the transition in two-thirds of his cases and Alvarez who reported on forty-one physicians' stomach carcinomata, twenty-one of which had histories which introduced the certainty of a previous ulcer or the strong probability of one.

He states this to be a common type of case and in connection with it suggests that while the medical treatment of gastric ulcer may be considered relatively safer perhaps, even if it does not cure the patient, *medical treatment of gastric cancer is equivalent to manslaughter or suicide,* and that the physician must be absolutely certain that it is an ulcer he is dealing with before he keeps the surgeon out of the case.

The criteria of Lahey and Jordan for the safe medical treatment of supposed gastric ulcer he regards as excellent, though not always safe. They are:

(1) *Within a period of three weeks the symptoms must be completely relieved.*

(2) *The lesion, by repeated X-ray study, must show definite improvement and final healing.*

(3) *Blood must disappear from the faeces and gastric contents.*

He would extend their scope with the following, which to him constitutes the only safe plan:

(1) To regard as cancer any indigestion with or without previous symptoms which appears after middle life in a previously well person.

(2) To regard as cancer any acute digestive disturbances in that period which are superimposed upon chronic digestive disturbance, and which do not respond promptly to routine measures.

(3) To regard as cancer, or as highly suspicious of it, vague general symptoms of fatigue, mental indifference, insomnia, etc., even though associated gastric disturbances are lacking.

(4) To continue to regard as cancer either of those clinical syndromes until it is proved not to be cancer.

(5) To resort without delay to exploratory laparotomy if the diagnosis cannot otherwise be made.

On the ground that cancerous indigestion has no hall-marks, while it is amenable to cure, to distinguish it from indigestion of other origins, he lays down the dictum that the surgeon is entirely justified in exploring without hesitation every person in middle life or before middle life who exhibits a dyspepsia which does not respond promptly and permanently to established methods of treatment.

This certainly is the gospel which should be preached and which, if followed, would reduce tremendously our present frightful incidence of inoperable gastric cancer.

N. H. G.

Self-Diagnosis.

The ease with which medicines can be obtained has placed within the reach of everyone a suggested remedy for all of the ordinary ills that fall to the lot of man. It might be said that the best that can be claimed for the majority of these remedies is that, in themselves, they can do no harm. This, however, is only partially true for a real danger lies in misinterpreting certain signs and symptoms which may be and often are common to several disorders of the body.

This is especially true in the case of children. The child is entirely at the mercy of his well-meaning parents, who take it upon themselves to prescribe for his every ailment. It is common, in many households, that when a child complains of abdominal distress or pain, an immediate rush is made for the castor oil bottle; without further questioning, a dose is administered forthwith. The very high percentage of cases of acute appendicitis, with rupture of the appendix, that are admitted to hospital with a history of having received a dose of castor oil for abdominal pain bear witness to the disastrous role which the use, through ignorance, of a laxative plays in this state of affairs. An acute appendix requires prompt medical care.

The laxative forces the contents of the upper bowel down upon the inflamed appendix. Thus the first principle of treatment, which is rest, is violated, and the not unlooked for result is rupture of the appendix with the added danger of peritonitis.

The following case history obtained from the surgical records of a large hospital illustrates a somewhat similar point. A middle aged man who had always enjoyed excellent health noticed a slightly-increased tendency to constipation. For a month or two, he obtained relief by taking, at regular intervals, small doses of a laxative. Gradually, his complaint became worse and, in addition to the constipation, he suffered twinges of pain. His implicit faith in the laxative, however, remained unshaken, and he used larger doses to obtain relief, but without success. Soon his condition became worse, a complete obstruction of the bowel ensued, and on consulting his physician, the diagnosis of cancer of the bowel was made.

The story of many illnesses, like the examples we have cited, bears witness to the tragedy of self-diagnosis and persistence in the use of some "remedy" which at best, is only a paliative and which but delays the chance of effective treatment and probable recovery.

LABORATORY

LABORATORY EXAMINATIONS: Their indications, method, and interpretation with special reference to the requirements of of the general practitioner.

By RALPH P. SMITH, M.D.,D.P.H., Provincial Pathological Laboratory, Halifax, N. S.

THE aim of this article is to provide briefly information on the indications, method and interpretation of useful tests that a medical practitioner should be able to perform. It also outlines the principles and interpretation of some of the more highly technical diagnostic procedures which may be performed for him at the laboratory.

The clinician should have an idea of what he expects from a test. Laboratory tests are merely an extension of our special senses. The microscope detects what the naked eye cannot, but the reverse is also true. In private practice some clinicians are so fully occupied in examining their patients that they do not have time to do the necessary laboratory test on them. In consequence, it is of value to be familiar with the technique of simple tests and also with the proper way in which a specimen should be sent to the laboratory.

Choice of Tests in Inflammatory Disease.

Indications: Pain. Temperature or rarely, appearance of shock with subnormal temperature.

Tests: Microscopical examination of urine for pus and bacteria. Differential percentage of leucocytes.

To find out organisms: Blood Culture. Agglutination tests.

If an abscess forms, puncture or incise it to obtain pus for examination by smear and culture.

Procedure for examination in Anaemia: Indications for examination: Weakness, Pallor, Dyspnoea, Oedema, Dizziness, Palpitation, Tinnitus, Heart murmurs.

Choice of Tests to Determine if the Blood is Normal.

A haemoglobin estimation comes first. Very rarely is the blood pathological with the haemoglobin normal. Examination of the stained or even unstained smear will detect these exceptions. If both are normal one need not examine further for anaemia.

If the haemoglobin or red cells in the smear are abnormal, do:—1. red cell count; 2. a total and differential white cell count; 3. an icterus index estimation.

Choice of Tests to Determine the Cause of Abnormal Haemorrhage.

Multiple haemorrhages are usually due to a haemorrhagic dyscrasia. A single focus of haemorrhage is likely due to a local cause and surgical measures should be employed.

Of most value in the diagnosis of haemorrhagic disease is: A blood smear examination. Look for the presence of platelets, the excessive or abnormal white cells of leukaemia and the irregular and scanty red cells of severe anaemia.

More exact information may be obtained by:—A count of the blood platelets, of the white blood-cells and of the red blood-cells.

Other tests of value are:—The time of clot retraction (of same significance as platelet count). The bleeding time. The coagulation time. The icterus index.

Always determine the blood group immediately and match patient's blood directly with the blood of an available donor in case a transfusion be urgently required.

Indications for Blood Chemical Tests.

A full blood chemical examination is a needless expense unless there are specific indications for each test.

Blood sugar determinations should be employed in cases only of diabetes or suggestive subjective symptoms, with obesity; arterio-sclerosis or gall bladder disease and suspected hypoglycaemia. A sugar tolerance test is unnecessary when the fasting blood sugar is above 0.15 per cent.

Blood urea nitrogen (normal 10-18 mgm per 100 cc.) (Total non-protein nitrogen has the same significance) should be determined in cases of impairment of renal function and acute disturbance of the gastro-intestinal motility with toxaemia. There is no necessity to employ test if the phenol-sulphonephthalein test is normal.

Blood creatinine (normal 1-2 mgm. per 100 cc.) is unnecessary unless urea nitrogen is over 30 mgm. per 100 cc.

Uric acid (normal 2-4 mg. per 100 cc.) should be used in cases of gout or suspected gout while the icterus index (normal 4-6) only in cases of jaundice and anaemia.

Procedure to Determine Gastric Function.

Indications: Epigastric distress or tumour. Gas eructation-vomiting. Diarrhoea—loss of weight.

Tests: Determine the emptying time of the Stomach by aspirating the contents of the stomach four or more hours after a meal. Note appearance and odour. Estimate free hydrochloric acid content and if absent repeat the examination one or two hours after a test meal. Examine stool for occult blood.

Choice of Tests to Determine Liver Function.

Indications: Intolerance to fatty foods; distress immediately after eating. Pain or tenderness in right upper quadrant of the abdomen. Jaundice in sclera of eyes and skin. Ascites.

Tests for common use: Examine the urine for presence of bile pigments. Take the icterus index of the blood.

Tests Occasionally of Value: Bleeding time. Examination of the faeces for bile pigments. Examination of duodenal contents for pus, bacteria and crystals. Urobilin in the urine. Bromsulphthalein test. Van den Bergh reaction.

Choice of Test to Determine Renal Functions.

Indications: Hypertension. Oedema. Nocturia or morning urine with a specific gravity under 1.015. Albumen or casts in urine. Before Prostatectomy.

Tests: To detect early disease use the urine concentration and water dilution tests. In chronic disease which is moderately or markedly advanced use the phenolsulphonephthalein test. In advanced disease, to determine prognosis or surgical risk test for blood urea retention.

When to do Cutaneous Protein Tests: In hay fever with seasonal variation. In young individuals suffering from spasmodic asthma. In infants with eczematous urticaria.

Cutaneous reactions to proteins *will rarely occur in patients over forty years of age who have prolonged attacks of asthma which are worse*: 1. on *exertion*. 2. during *attacks of bronchitis especially in winter.*

It is very rare to obtain help from cutaneous protein tests in urticaria or eczema in adults.

In Hypertension: Blood pressure estimation. Urine examination, general and microscopic. Water concentration test.

If specific gravity is below 1.025, estimate the blood urea. Repeat these estimations after one week's medical treatment.

Diabetes. Examine the urine at once for sugar and acetone and diacetic acid. (If diacetic acid is present, give 1000 cc. of fluids, broth, coffee, tea and water every six hours and 2 level teaspoons of granulated sugar every two hours during the day). (1 teaspoon equals 4 gm. approximately). Insulin is of life-saving value.

Take the blood sugar immediately and repeat the following morning for the fasting value. Later it may be estimated once or twice weekly if necessary.

Urine. Daily twenty-four specimens. Examine for sugar and if present estimate the total amount of sugar in grams and examine for the presence of acetone bodies.

Choice of Tests in Disease of the Nervous System.

Spinal fluid examination. If clear examine for cell increase, globulin increase, Wassermann or Kahn Test. If turbid examine smear for cells and bacteria. Culture for bacteria.

Comatose State or Convulsions. Intracranial disease is the commonest cause of coma and convulsions in adults while in children the acute general infections are an equally frequent cause.

Valuable Tests: Lumbar puncture and examination of the Cerebrospinal Fluid for pressure. If the fluid be clear examine for cells, globulin and Wassermann or Kahn Test. If the fluid be cloudy examine a film for the type of bacteria and if necessary culture.

The Blood: Stippling of red cells for lead poisoning. Blood Urea for uraemia. (It may be twice normal in terminal infections). Blood Sugar for diabetes.

The Urine: In the comatose the urine examination is frequently misleading. Albumen and even red blood cells frequently occur in comas or convulsions from causes other than uraemia. Sugar may be present in the urine after a head injury. Ketone bodies may occur from simple starvation. There is usually oedema and a history of kidney disease in Uraemia and a History of previous diabetes in diabetic acidosis. Passing a catheter in elderly men may reveal a prostatic obstruction which arrests kidney secretion. Examination of the fundus of the eye by the ophthalmoscope for papillaedema, optic atrophy, arterio-sclerosis or haemorrhage, albuminuric or diabetic retinitis is a most valuable procedure.

The material for this article is chiefly culled from the following text books: *Laboratory Mecicine* by Nicholson; *Clinical Diagnosis by Laboratory Methods* by Todd & Sandford; *Surgical Pathology* by Boyd. The texts have been selected by the writer, and are those found most useful in his own Laboratory.

Department of the Public Health

PROVINCE OF NOVA SCOTIA

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

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

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

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1st Vice President	DR. F. O'NEIL,	Sydney.
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MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

Hall, E. B., Bridgetown.
Braine, L. B. W., Annapolis Royal.
Kelley, H. E., Middleton (County) (No report from Town).

ANTIGONISH COUNTY

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

CAPE BRETON COUNTY

Densmore, F. T., Dominion.
Miller, B. F., New Waterford.
MacKeough, W. T., Sydney Mines.
Archibald, B. C., Glace Bay.
McLeod, J. K., Sydney.
O'Neil, F., Sydney (Louisburg & C. B C .).
Murray, R. L., North Sydney

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Havey, H. B., Stewiacke.
Johnson, T. R., Great Village (County).

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Drury, D., Maccan (County).
Gilroy, J. R., Oxford.
Jeffers, Edward, Parrsboro.
Rockwell, W., River Hebert (M.H.O. for Joggins).
Withrow, R. R., Springhill.

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DeVernet, E., Digby.
Rice, F. E., Sandy Cove (County).
Belliveau, P. E., Meteghan.
.....(Clare Municipality)

GUYSBORO COUNTY

Brean, H. J. S., Mulgrave.
Smith, J. N., Guysboro (County).
Moore, E. F., Canso.
..... (St. Mary's Mcpy.).

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Forrest, W. D., Halifax (County).
Payzant, H. A., Dartmouth.

HANTS COUNTY

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

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McLeod, J. R. B., Port Hawkesbury
LeBlanc, L. J., Cheticamp (County)
McLeod, F. J., Inverness.

KINGS COUNTY

Cogswell, L. E., Berwick.
Bishop, B. S., Kentville.
Burns, A. S., Kentville (County).
deWitt, C. E. A., Wolfville.

LUNENBURG COUNTY

..... (County).
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McKinnon, C. G., Mahone Bay
Zinck, R. C., Lunenburg.
Zwicker, D. W. N., Chester (Chester Mcpy.)

PICTOU COUNTY

Blackett, A. E., New Glasgow.
Chisholm, H. D., Springville (County).
Bagnall, B. O., Westville.
Stramberg, C. W., Trenton
Sutherland, R. H., Pictou.
Whitman, G. W., Stellarton.

QUEENS COUNTY

..... Liverpool.
MacLeod, A. C., Caledonia (County).

RICHMOND COUNTY

LeBlanc, B. A., Arichat.

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Brown, C. Bruce, Clark's Harbour.
Churchill, L. P., Shelburne.
Fuller, L. O., Shelburne (County).
Densmore, J. D., Port Clyde (Barrington Mcpy.).

VICTORIA COUNTY

Gillis, R. I., Baddeck (County).

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Blackadar, R. L., Port Maitland (Yar. Co.).
Burton, G. V., Yarmouth.
O'Brien, W. C., Wedgeport.
LeBlanc, J. E., West Pubnico (Argyle Mcpy.)

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

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

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

Communicable Diseases Reported by the Medical Health Officers for the Period Commencing September 22nd, to October 31st, 1933.

County	Cer-Spi. Meningtis	Chicken Pox	Diphtheria	Influenza	German Measles	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	V. D. G.	V. D. S.	Whooping Cough	TOTAL
Annapolis	..	..	..	2	..	..	2	..	..	..	1	1	..	6
Antigonish	..	..	..	..	..	..	..	9	1	..	..	..	..	10
Cape Breton	1	3	..	..	..	..	..	1	2	..	..	..	..	7
Colchester	..	..	..	..	..	..	..	5	..	..	2	..	..	7
Cumberland	..	..	..	..	1	..	..	4	..	..	..	..	..	5
Digby	..	10	..	..	..	1	1	..	4	..	..	..	..	16
Guysboro	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Halifax City	..	5	1	..	..	..	..	22	..	1	..	..	12	41
Halifax	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Hants	..	..	..	..	..	..	..	1	..	2	..	..	6	9
Inverness	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Kings	..	..	..	40	..	..	..	..	..	3	11	1	..	55
Lunenburg	..	..	..	..	..	..	..	1	..	..	..	..	25	26
Pictou	..	..	..	..	..	..	..	..	2	..	..	..	..	2
Queens	..	..	1	..	..	..	..	..	..	..	..	2	..	3
Richmond	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Shelburne	..	..	..	..	..	..	..	..	..	1	1	..	..	2
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Yarmouth	..	..	..	..	..	..	..	..	..	..	..	..	..	...
TOTAL	1	18	2	42	1	1	3	44	9	7	15	4	43	190

RETURNS VITAL STATISTICS FOR SEPTEMBER, 1933.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis	8	20	12	10	8	3
Antigonish	11	18	6	5	9	0
Cape Breton	93	110	98	36	25	9
Colchester	19	13	29	11	7	3
Cumberland	38	29	44	20	10	1
Digby	20	14	10	11	7	0
Guysboro	16	16	5	3	3	1
Halifax	131	94	117	54	45	10
Hants	38	15	17	12	9	1
Inverness	15	15	10	11	9	1
Kings	12	13	22	6	3	1
Lunenburg	20	27	21	12	12	4
Pictou	29	27	29	10	16	4
Queens	8	10	8	5	3	0
Richmond	17	10	1	10	5	0
Shelburne	13	11	9	4	6	0
Victoria	8	11	3	2	2	1
Yarmouth	11	8	17	6	4	1
TOTAL	507	461	458	228	183	40

Minutes of the Annual Business Meeting

(Continued from the October Issue.)

Re-Letter of Dr. Routley re Medical Relief in Canada.

The letter was read by Dr. C. J. W. Beckwith. This letter was published in the BULLETIN two months ago with a covering letter. It would appear that this letter was sent to every doctor in Canada.

Discussion followed:—Dr. A. R. Campbell, Yarmouth,

"received a copy of the letter and if any one did not it was published in the BULLETIN.

The President replied that it was necessary to read the letter in order to bring it to their attention.

Moved by Dr. A. R. Campbell, seconded by Dr. MacLean,

"that the Nova Scotia Medical Society give their sympathetic approval of this matter and bring it to the attention of the Federal Government.

We do not consider it necessary for the Medical Society of Nova Scotia to send a representative to Ottawa in order to bring this to the attention of the government. It should be recommended by the Provincial Government."

Discussion by Dr. M. A. B. Smith. "I have read the letter in the BULLETIN. I consider it a serious matter and I feel that it hardly becomes this province—the oldest province in the Dominion—to ask the Federal Government for aid at the present time."

Dr. LeBlanc. "I think it deserves to be discussed. There are a good many places in a deplorable condition. A good many physicians are finding it very difficult and in some cases there are persons who are not receiving the medical attention they need simply because they are unable to pay. This matter was discussed at Saint John. Some physicians in that province are not receiving an adequate return for their services."

Dr. Murphy. "I did not receive the letter officially. It has not come before the government and this is the first time I have heard of it."

Dr. H. G. Grant was at the Saint John meeting and heard the discussion. He had been asked to survey the province of Nova Scotia to find out whether this relief was needed. He did not get sufficient information and was unable to make the survey. Dr. Grant expressed the opinion that if our Society considered this question important they should not stand for any evasion on the part of officials at Ottawa; also that it seemed as logical that money should be given for medical relief as for food, rent, clothing, and etc.

Dr. Burris. "I do not think the Society should declare itself on this matter. The question is far reaching but possibly we will not approve of it.

Invariably the question of State Medicine comes up. It is easy to start relief but hard to stop. The matter should be very carefully considered before we adopt this attitude."

Dr. G. H. Murphy, in explaining relief said: "the Dominion Government pays one-third, Provincial Government one-third, Municipalities or Towns one-third. The system is worked out in this way: Municipal authorities look into the district and make out the grant required for actual relief, submit it to the Provincial Government and to the Federal Government and work out on a basis of one-third for each unit. Relief is only for the essential things of life. From time to time there are requests for school books, money to pay the teacher's salary, etc. The Government does the best they can. Dealing with our own province I have not heard any request from any doctor in this province that they were in dire need or asking for relief—for that is what it amounts to. At the present time we are in a very dangerous position. We are getting to a phase in our evolution or devolution where the people are looking for free hospital treatment, free medical treatment, free schools, and before we, as a medical organization representing the interests of our own province, embark upon an extravagant demand in this there is good reason why we should ponder very seriously."

Dr. Johnson. "I think we should consider the matter very seriously as Dr. Murphy has said. If this is a matter of provincial aid why should we in Nova Scotia pay medical relief to the West? We are not getting any medical relief in Nova Scotia. We will have to pay the taxes and this aid will be abused. If we fall in line with medical relief in Nova Scotia I would advise going very slowly and that we take no definite action."

Further discussion was made of the question by Dr. Johnston and Dr. Dr. J. R. Corston.

Dr. Gosse had heard the discussion in Saint John. It was his understanding that the Federal relief grants constituting a third of the total relief money came marked "not to be used for medical relief," and that the effort being made was to have that limitation removed. He believed that many of the men were in a very bad way indeed, and felt that we should subscribe to their request. "It is their turn to-day, it may be ours to-morrow, and anyway, we are all Canadians."

Dr. Densmore. "I think that medical relief is needed among the mining areas and the South Shore. It was hardly right if the West had asked the Medical Society for relief not to give it to the West."

Dr. Herbin reported very few on full-time relief in his section (South Shore).

Dr. A. B. Campbell. "If the Western provinces get this relief we are going to pay for it. There is no reason why if we should need it, we should not get it also."

Moved as an amendment—by Dr. R. M. Benvie, seconded by Dr. Johnston, "that no action be taken at the present time."

The amendment by Dr. Benvie was put to a standing vote—27 for; 29 against.

Amendment lost.

The motion of Dr. A. R. Campbell, Yarmouth, was put to a standing vote 31 for and 29 against. Carried.

Dr. G. H. Murphy then briefly addressed the meeting, He expressed his appreciation of the co-operation tendered him by members of the profession during his term of office, and urged that the same backing be accorded his successor, Dr. F. R. Davis, who, being unable to be present, tendered his regrets through Dr. Murphy.

Cancer.

A discussion on Cancer led by Dr. S. R. Johnston and Dr. N. H. Gosse followed.

Dr. Johnston read the suggestions made by the Cancer Committee, given below:

1. To arrange for a section in the "Journal" in which each month some questions relating to diagnosis and treatment of cancer will be dealt with.
2. To prepare from time to time leaflets or booklets dealing with early manifestations of cancer in various parts of the body, for distribution to all Canadian doctors.
3. To prepare and distribute, when the time is opportune, literature for the enlightenment of the laity on this subject.
4. To arrange for special meetings at regular intervals in all local and district medical societies throughout Canada at which speakers secured locally and from adjacent medical teaching centres will give addresses on some aspect of the cancer problem.
5. To arrange through the Provincial Medical Associations for speakers to address public meetings on this problem.
6. To use its influence with the provincial associations to appoint a Provincial Cancer Committee in all provinces where this step has not already been taken.
7. To co-operate with the Provincial Cancer Committees in organizing a local committee in each organized hospital of 100 beds and upwards. This local committee will study all records of cancer cases admitted to the hospital and take the responsibility to see that they are as complete as possible. It will undertake to make a tabulated synopsis of each cancer record on a form provided by the Department of the Canadian Medical Association. These forms will be kept available in a loose-leaf binder in the hospital. The committee will provide a speaker at each monthly staff meeting, who will give a brief address on the early signs of cancer in some site, using the hospital records to give point to his communications.

Moved by Dr. S. R. Johnston, seconded by Dr. Thomas,

"that we, as a Society, endorse the suggestions made by this Committee to the C. M. A. Council."

Dr. N. H. Gosse read the following interesting paper:

STATEMENT RE CANCER SITUATION

Mr. President:—

It has been quite interesting I am sure to hear Dr. Johnston tell of C. M. A. activity in the field of Cancer. As you know Sir, it was my good fortune to have sat in on the Council meeting at Saint John this year and to have heard Dr. MacEachern read his report—a most excellent one indeed, and I cannot but

express my regrets that the Cancer Committee of this Society has not before this time been presenting a similar report to us.

But great bodies move slowly, Federal and Provincial alike. It seems to me Sir, that movements of any magnitude must originate and be sped on their way by exceedingly small groups or individuals, if any great purpose is to be accomplished.. The world is full of examples of that at the moment and we have long ago accepted the truth that the way to kill a thing is to relegate its activities to a Committee that is not interested in it. Certainly that view is confirmed when one thinks in terms of this Society's Cancer Committee.

Mr. Chairman, in this matter I seem to be the fanatic of our Society. However, the terribly radical views which I expressed at Digby and since, I have the satisfaction of seeing adopted from time to time by my ultra-conservative critics, and I have been ready for some time past to come before you to-night with a further programme to which at this juncture I believe this Society would have been ready to lend its support. For, while it is true that something has been done in the establishing of a Cancer Clinic at the Victoria General Hospital a great deal more remains to be done.

In view of the fact, however, that a new Government is just now coming into power, and let us hope looking for new worlds to conquer in the field of public health; and in view of the fact that this is the major Public Health problem confronting us to-day, I have decided not to propose any programme which would abrogate to ourselves any privileges and responsibilities which the department of Health might want to assume. Certainly it is my opinion that there never has been a more opportune time nor has there been a greater opportunity for a Government or some other organization to contribute something of real value to our people as there is at this moment.

In lieu of that, however, I do propose that since our Cancer Committee was not re-elected last year and is therefore defunct that a small group be empowered to study the subject and in view of what has been said to take such steps in advancing the cause of cancer as to them seems proper.

If this finds a seconder, I would suggest Sir, that you name three representative men who will retire now and bring into this meeting their proposal of personnel of such a group. If I may, I should like to add that the work to be done calls for interested men—men of faith, courage, patience and enthusiasm in no small degree. And since such a movement must grow from small beginnings, so should its committees grow—with the smallest possible nucleus, which being so empowered would draw to itself enthusiastic converts to the cause as they were made. For though for obvious reasons the beginning should be at Halifax eventually the movement must be province-wide, and then so must its committee be province-wide. But to attempt anything but the smallest group just now, would be to make it top heavy and to court disaster.

We have a big responsibility in this matter Sir, I should like to see us assume it sensibly.

Moved by Dr. N. H. Gosse, seconded by Dr. W. R. Dunbar,
"that the in-coming Executive appoint a Cancer Committee." Carried.

Moved by Dr. G. W. T. Farish,
That a vote of thanks be given to certain persons after the meeting,

The Golf Club for putting their Club at our disposal.
To the Lord Nelson Hotel.

To the Committee of Arrangements and members of the Halifax Medical Society.
To the Press.

To members for the very interesting programme of the Dalhousie Refresher Course in amalgamation with the Medical Society of Nova Scotia Annual Meeting.
To the various Hospitals.
To the President for the wonderful Presidential Address which we have listened to to-night.

Moved by Dr. N. H. Gosse, seconded by Dr. J. K. MacLeod, "that Dr. Farish's report be adopted. Carried."

New Business.

Official invitation to the C. M. A. to meet in Nova Scotia. The C. M. A. meets in Calgary next year, has an invitation to meet in Montreal in 1935,in Victoria in 1936 and Fort William, Ontario and at an early date in London, Ontario.

Moved by Dr. W. R. Dunbar, seconded by Dr. V. Connors, "that they be invited to meet in Halifax in 1937." Carried.

Further resolved "that any unfinished business be left in the hands of the in-coming Executive.

Meeting adjourned.

The following clipping from the *New Glasgow Evening News* of September 29th is published as it might be interesting to our readers:—

"A pathetic story of a rural farmer paying almost his entire savings in the hope of regaining his fading eyesight only to find he had been cruelly hoaxed, was told to the Canadian Press to-day by G. Enos Dares, of Rhodes Corner, N. S.

Seated on a wooden box in the general store at the little hamlet twenty miles west of here in Lunenburg County, Dares, through a woman neighbour, told over the telephone how he had been victimized by two men who told him they were eye specialists from Montreal. They had promised to restore his failing sight, he said, by removing a cataract they claimed was hindering his vision. Instead, while he lay on his bed, they dropped liquid in his eye and then extracted what they claimed was the obstruction. It was the delicate inner skin of a soft-boiled egg.

But the fifty-three year old Dares was not aware of that. He believed they had accomplished a daring operation to save his sight and paid over $987.50. The men drove away in their car with a promise to return a suitable pair of glasses that would clear his dim sight.

It was not until they failed to return, that Dares grew suspicious. He waited in vain for his glasses and then complained to Royal Canadian Mounted Police to whom he gave a descrittion of the car and its occupants who claimed to be a Dr. A. R. Macumber of Montreal and his assistant known to the farmer only as Hamilton.

Dares said the "operation" had been performed in his house September 7th after he had been in touch with the men whom he believed were treating his neighbour.

TUBERCULOSIS

THE TUBERCULOSIS MOVEMENT TO-DAY*

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A BRIEF title to any paper is always an advantage. At the same time it may be misleading. Certainly we are not attempting here a comprehensive or exhaustive analysis of the tuberculosis movement to-day. Rather, we shall endeavor to point out a few of the more conspicuous features of this program, a few of the principal points of emphasis, with their indications as to how effort may be most promisingly applied in the immediate future. Certain comparisons between the situation to-day and that of a decade or two ago may also be of significance.

A glance at the tuberculosis programme of 15 or 20 years ago, in the light of our interests and objectives to-day, brings out certain contrasts and certain similarities. In the first place, it is evident that some of the attitudes and slogans of the early period still hold good, though occasionally with a difference in interpretation.

Sixteen or 17 years ago, when the Framingham Tuberculosis Demonstration was initiated, certain experience in connection therewith crystallized in the statement, "The next step in tuberculosis work is the first step, namely find the cases." To a large extent that is still true to-day, as evidenced by our Early Diagnosis Campaigns, and similar projects. There is, however, some difference in approach. Then, we were mainly in pursuit of the adult, and of the active case, in order to get him into the hands of the physician, to provide a clinical examination, to arrive at a diagnosis and to secure proper treatment. We are now much more interested in and hopeful about tuberculous infection. We are also much more interested in childhood. The basis of our attack has broadened. We are endeavoring to break the tuberculosis chain further back in the chronology of the typical case of disease. We are interested not only in the active case, especially in young adults, and more particularly in females, where the rates are relatively high, but in infection, and in the so-called latent case in childhood, with the earliest signs of invasion.

We have become aware that roughly speaking there are 3 and sometimes 4 principal periods or episodes in the typical case of tuberculosis; infection, latent childhood disease, perhaps reinfection, and active adult disease.

This change in point of view comes about through our acquisition of greater knowledge of the epidemiology of the disease. The science of epidemiology is at last being effectively applied to the problem of tuberculosis. Our point of view concerning the incidence of tuberculous infection has more or less

*Read before the Annual Meeting of the Indiana Tuberculosis Assocation in Indianapolis, Ind., April, 1933.

radically changed. There may have been a time in urban populations when tuberculous infection was practically universal, but this can no longer be assumed. It is true that in certain rather selected urban groups its incidence is still high. Hetherington still finds 90 per cent. of adolescent school children or pre-adults with positive tuberculin tests in Philadelphia. It is believed, however, that a more representative finding is that reported from Massachusetts where the average for many communities among children between 5 and 15 years of age is 28 per cent. Incidentally, when these are examined by X-ray, 5 per cent. show some damage, usually slight, and in about 1 per cent. this is serious enough to require continued medical attention. Instances of the opposite extreme in postive tuberculin findings are reported by Broker, in Minnesota, where only 1 in 160 girls and boys was positive, and by McCain, in North Carolina, where only 4 per cent. were positive. It may be remembered that in 1917 in Framingham a group of younger-aged school children showed 33 per cent. with positive tuberculin reactions. Ten or 12 years later, after the Demonstration, a considerably older school age group showed only 18 per cent. positive. These two sets of tests were sufficiently similar in technic to be legitimately compared, even though differences in method may in part account for some of the wider variations among recent findings cited. It would therefore appear that the prevalence of tuberculous infection is diminishing and that it is controllable. It is no longer necessary to assume that infection is inevitable. It is possible to find the foci of infection, whether human or animal. It is worthwhile, therefore, to stress the point that every tuberculosis case comes from another. The search for family foci in particular is profitable. The examination of contacts is advantageous both from the angle of discovering a source of infection and also from that of disclosing possible channels for further dissemination.

All of this represents a rather striking change in point of view—a new attitude that is perhaps the principal feature of the tuberculosis movement to-day. The discovery of the child in tuberculosis promises to be a very great contribution, not only to the welfare of children but also to the problem of tuberculosis control at large. This approach has stressed the intensive use of relatively new instruments in the wholesale search for the disease. Fluoroscopy as a screening process, and the use of the tuberculin test with the X-ray have very advantageously supplemented the older clinical procedures. The use of these diagnostic devices tends to become universal among the younger age groups, only the question of cost standing in the way. Here the situation is promising. Experiments are indicating the feasibility of these procedures on a large scale. For instance, the Queensboro Tuberculosis Association in New York, with the co-operation and financial aid of the Metropolitan Life Insurance Company, has been experimenting with the Powers portable rapid X-ray camera and paper films, demonstrating the possibility of making as many as 1,000 chest exposures in a day, at a per capita cost somewhere in the neighbuorhood of $.75, including the expense of interpretation. Experiments elsewhere indicate a cost possibly as low as $.40. In normal times many Communities would not find this too great a burden to add to the routine school health and medical examination procedures.

It is true that there is as yet no universal acceptance of the significance of so-called latent tuberculosis in childhood, as to its hygienic or therapeutic indications in all cases; yet on the whole the outlining and defining of this phase of the manifestation of tuberculosis seem to represent a big advance in our concept of the disease and in our methods of detection and control.

In the meantime, while human foci have been more and more frequently detected and eliminated, much progress has also been made toward the elimination of animal foci and the control of the hazards of tuberculous milk. It is well to realize the progress made in these directions and the necessity for maintaining the position now held. A relaxation in our efforts at control may be costly. One cannot but experience misgivings when one notes serious curtailments, for instance, in appropriations for health department epidemiological activities, or for institutional care of open cases of the disease. It is not reassuring to read of the organized opposition to the tuberculin testing of cattle in Iowa and elsewhere. We are here faced with the dangers of losing the advantages gained in the past, and of restoring certain of the largely eliminated hazards of childhood. There might also readily be incurred serious economic consequences to individuals and families, to the cattle and dairy industries, and to our communities generally.

Still in the general field of epidemiology, it is regrettable to note that while great steps in advance have been taken along the above mentioned lines, little progress has been made toward the artificial immunization of humans against this disease. The Calmette vaccine is, of course, being widely experimented with. Certain observations reported by foreign experimenters seem promising but are accepted with reservations here. European statistics concerning the effectiveness of the vaccine are viewed with doubt by statistical authorities in this country. Perhaps the most basic work in the field is being done by Park in New York, with the co-operation of the Metropolitan Life Insurance Company and other agencies. Here the vaccine is being used with careful controls, and with results that are considered encouraging. However, most authorities feel very definitely that this procedure occupies a controversial position and cannot as yet be endorsed for routine or wholesale application.

On the other hand, more strictly in the field of treatment, but of public health as well as therapeutic significance, it is very encouraging to note the increasing success with which the lung collapse, rib resection, and other forms of thoracoplasty are being employed—procedures that with increasing frequency are proving advantageous to the patient, as well as helpful in decreasing human foci of infection. These certainly represent outstanding advances in treatment methods of the present and recent past, and may be of sufficient significance to account in part for the continued improvement in tuberculosis mortality.

This suggestion seems to be borne out by available records. As is well known, in the treatment of advanced cases with extensive cavitation prior to the days of thoracic surgery, the early mortality following diagnosis was extremely discouraging. In a study by Sprungmann, based on 626 cases, there was found a total mortality of 78.2 per cent. in 16 years, and a death rate of 61.7 per cent. in the first 2 years. Barnes and Barnes, in 1,450 cases, found a mortality of 80 per cent. within 1 year, and 90 per cent. within 5 years. In contrast to this, as Fischel recently pointed out, a study by Neuberger based on cases treated with thoracic surgery indicates that after 1 to 5 years, over 61 per cent. had regained and retained their working and earning capacity, and only 17 per cent. had died, the remaining being in the incapacitated group. Chadwick, from the experience of the Herman Kiefer Hospital in Detroit, referring to the period 1929 to 1932, states that "The number dicharged with favorable results has increased from 45 per cent. to 69.8 per cent., and the number of deaths has decreased from 25 per cent. to 6.5 per cent. The marked reduction of deaths and the improvement in discharged patients have been due

in a large measure to the general use of collapse therapy." When one realizes the increasing extent to which this great contribution to tuberculosis therapy is being applied by institutions throughout the land, the above assumption concerning its probable relationship to mortality seems justified.

On the statistical side we are all aware of the progress that has been made as measured by the death rate from tuberculosis. With the disease now ranking 7th or 8th, we have come a long distance since the time when it occupied the first position as cause of death. However, it must be recognized that mortality is by no means a complete measure of the situation. Furthermore, deaths at all ages are sometimes not as significant as deaths in particular age groups, as has been frequently pointed out. This is especially true of tuberculosis, which still stands first as the cause of mortality and disability in the productive period of life from 20 to 40 years. Nevertheless, the mortality rate presents a gratifying picture. Among Metropolitan industrial policy holders, who constitute a group of many millions, the death rate for 1932 reached 70.1 per 100,000, contrasted with 114.2 in 1922, and 224.6 in 1911. This improvement in 1932 seems to have been characteristic for the country at large, so far as records are available. Here in Indiana, with the rate of 88.1 in 1922, and 61.1 in 1931, the rate was 59.9 in 1932, which represents 16 fewer deaths than in 1931. In the Metropolitan experience the drop in 1932 is 8.6 per cent. under the previous year, which is the biggest percentage annual decline in a decade. Thus far, 1933 seems to be reflecting this downward trend, the cumulative rate to date being 66 as compared with 69.2 in 1932. There seems to be no reason as yet to doubt Dublin's earlier forecast of a rate of 40 for Metropolitan industrial policy holders by 1939, and a rate that may fall between 28 and 37 per 100,000 for the original registration states by that year.

On all hands considerable surprise has been expressed that there has been thus far no effect upon the death rate coincident with the depression. While this is evidently a fact, of course no one can yet estimate the ultimate effects of the depression, and no one can say what may or may not follow the underfeeding and malnutrition and other physical and mental characteristics of the depression period, especially as they bear upon childhood. Certainly undernutrition is by no means negligible, as shown by the fact that in New York City alone, in 1932, 32 deaths were reported by the Division of Medical Records as resulting from starvation, including no cases of refusal to eat, inability to eat, or cases of deficiency disease. The prospects are considered by many to be disturbing, yet thus far, in addition to the mortality picture, there have been reported no very significant or definite signs of an increase in the incidence of latent or active tuberculosis in any age group.

Indeed, 1932 was the best year thus far in the general mortality experience of Metropolitan industrial policy holders, and probably also of the population at large. It seems probable that a combination of circumstances may be responsible for this favorable situation. In the first place, health departments and voluntary health agencies have operated effectively, even with curtailed resources. In the second place, relief, even though on a minimum basis in many communities, has nevertheless been organized and administered with thoroughness. In the third place, our public at large was fairly well informed concerning disease prevention and health conservation, and has drawn upon the reserve of education built up in the pre-depression years, contributed to by public and private agencies alike. Finally, and perhaps most important climatic and epidemic conditions were most favorable during 1932. In par-

ticular, we were relatively free from outbreaks of acute respiratory disease, particularly influenza. When influenza and pneumonia incidence and mortality are low, deaths from other causes, including tuberculosis, tend to remain at a minimum. By way of contrast we have the experience of 1918, and indeed the minor influenza outbreak in the early part of 1933, when deaths from many causes showed a tendency to increase, although, fortunately, this set of circumstances in this latter instance has appeared not to have affected the tuberculosis mortality to a serious degree.

Looking back over the remarkable decline in tuberculosis mortality in the last several decades, it must of course be admitted that many forces and factors have been at work, including economic and social improvement, general sanitation, occupational hygiene, etc. Nevertheless it has been definitely established that the antituberculosis campaign in which we have all been engaged has contributed materially to this very concrete accomplishment. There is every reason to hope that the campaign, if continued along present lines, with such modifications in emphasis as new knowledge and circumstances may dictate, will lead us—providing we meet with no serious setback such as might be associated with the sequelae of the depression—to man's ultimate conquest of tuberculosis that will place this disease, alongside of typhoid fever, yellow fever, and diphtheria, in the museum of fast disappearing causes of death.

Hopeful signs that augur well for the future are the co-operation of forces and the integration of effort that seem to be more and more characteristic of our general health programme. There is, I believe, a greater mutual understanding of aims, and mutual aid between health and medical organizations than ever before. This applies to tuberculosis associations, to physicians, to health officers, and to civic and industrial units. The leadership of health authorities is becoming more conscious, more liberal and more constructive. Our present joint efforts to maintain appropriations and personnel for public health work are an encouraging sign of the times. In addition, as stated above, the public is better informed than ever before, as a result of the activity of such organizations as the Indiana Tuberculosis Association.

All this leads us to hope that in spite of the present serious handicaps, we may be successful in holding the gains of the past, in experiencing only a temporary curtailment in our resources, and in making a wisely balanced use of such facilities as we now have for the promotion of the most essential services. We can also hope to see the most effective integration of the tuberculosis movement into the general health programme, recognizing its relation to administration, to sanitation, to education regarding nutrition, health examinations, and similar health promotive activities in the field of personal hygiene. The realization of those hopes, in which I know you all share, will carry forward the control of tuberculosis to a triumphant termination.

OBITUARIES.

The BULLETIN regrets to announce the death of Mrs. Perry, mother of Mrs. T. A. Lebbetter of Yarmouth, who died early in October.

The BULLETIN extends its sympathy to Dr. Bernard Francis in the loss of his wife which took place early in October at Sydney Mines.

Branch Societies

The following is a report of the semi-annual meeting of the Valley Medical Society held at Berwick, October 26th, 1933.

The meeting opened with Dr. L. B. W. Braine of Annapolis in the chair, and twenty-three members and guests present. The minutes of the annual meeting were read and approved. The question of dividing the Society into Eastern and Western sections was brought up and discussed, particularly by Drs. Sponagle, deWitt, Cochrane and Corbett. It was the opinion of the members that this would not be a wise move. It was moved by Dr. Sponagle and seconded by Dr. Cochrane that a committee composed of Drs. Elliott and deWitt meet the Windsor men about their joining the Society.

Dr. Sponagle moved and Dr. F. S. Messenger seconded the following resolution re the Provincial Medical Board.

Whereas, in the opinion of the Valley Medical Society, the Personnel of the Provincial Medical Board, as at present constituted, is unnecessarily large.

And whereas, the funds provided for its administration are not furnished by the Government, but are furnished by Students' Fees and Registration Fees.

And whereas, the majority of the Board are now appointed by the Government, and concerning whose appointment the Medical Profession is not consulted.

Therefore resolved, that the Government be asked to amend the Act, at next session of the House, that its membership be reduced, and that the entire Board be elected by the Profession, and for only a limited period.

Further resolved, that in the opinion of the Valley Medical Society the most truly representative bodies to carry out that election would be the Local Medical Societies.

Further resolved, that copies of this Resolution be sent to the other Local Societies for their action, and to members of the Legislative Committee of The Nova Scotia Medical Society.

Dr. T. A. Kirkpatrick of Kentville read a paper on "Some Aspects of Diabetes with Case Reports." He pointed out the difficulty of always getting the co-operation of the patient at home and advised a period of hospitalization for study of the patient, determination of blood sugar, finding a suitable diet with or without insulin. From his own experience he stressed the necessity of preoperative urinalyses as sometimes sugar is found where it is least expected.

Dr. Malcolm R. Elliott of Wolfville presented a paper "Failure of the left ventricle without failure of the right" and went into the pathology of the condition and reported a case in a man of sixty-three years who before his final, fatal attack had several with the features of Acute Pulmonary Oedema only relieved after several hours and the administration of Atropine gr. 1/20. During these attacks he had to be supported by sitting up and leaning far forward. This patient had high blood pressure (250 mm. Hg.) for upwards of fifteen years.

Dr. A. S. Burns of Kentville then gave a case report of Dilatation of the Heart in a young woman which apparently followed the 'Flu and cleared up with ten days rest in bed. The X-ray plates showing the enlarged (dilated) heart and then the heart ten days afterwards were shown.

The next paper was "Recent developments in Anaesthesia" by Dr. C. M. Bethune of the Victoria General Hospital. The use of Nembutal as a preliminary to general anaesthesia was outlined. The speaker gave in detail the technique for the administration of Avertin as a basal anaesthetic and demonstrated the apparatus used. He pointed out its value in apprehensive patients, particularly Goitre cases.

Methods to reduce postoperative nausea and vomiting were discussed particularly the administration of glucose. With regard to inhalational anaesthesia the speaker noted that poor relaxation was often due to anoxaemia rather than too little ether and was remedied by a few breaths of pure oxygen.

The final paper of the afternoon was "The Practice of Medicine in 1883 and to-day—A comparison" by Dr. J. A. Sponagle of Middleton. At the conclusion of this most interesting paper Dr. Sponagle was roundly applauded.

A vote of sympathy was moved to be extended to Dr. L. R. Morse of Lawrencetown who had the misfortune to injure his leg recently.

The annual meeting of the Society will be held in Middleton in May.

MEDICAL COSTS TOO HIGH.

The ethics of the medical profession were given a jolt, as far as Chicago is concerned, a few days ago when the Cook County Medical Society endorsed advertising, urged a reduction in costs of medical care and recommended that scientific programmes of the organization be planned to answer the needs of the general practitioner rather than the specialists. The society has a membership of several hundred doctors who recently broke away from the Chicago Medical Society.

The urgency for reducing the costs of medical care is a pressing one and one that should be considered by others than those in the profession. Articles have appeared in the medical and lay press of this province within late months by leaders in medical thought in which state medical services have been advocated as a means of cutting costs to the public.

Medical men who have travelled in European countries have been impressed by the wide difference in cost of medical services over there and at home. They, or at least some of them, have come home with the belief that the members of the profession could be of greater service to mankind if the cost of service, apart from their own professional work, was lowered. They have also noted the difference in the professional fees on the two sides of the Atlantic.

Medical men, as a class, cannot be put down as money grabbers. They give away, in services, probably more than do any other class of people. At the same time their valuable services, personal and associates, are of such a cost that so-called middle class people are more or less financially crippled for years after a major counter or two. If fit people are an asset to the state and unfit a liability then it appears by no means illogical to suggest that the state interest itself in helping people to be and become physically fit. The decisions of the Cook County Medical Society merit wide and serious consideration.—*Truro Daily News*, Oct. 27.

Personal Interest Notes

FRIENDS of Mrs. (Dr.) D. F. MacLellan will regret that she is a patient in the Aberdeen Hospital, New Glasgow. Mrs. MacLellan had to under go an emergency operation, but is now making, normal recovery.

Dr. Charles R. Baxter of Moncton, N. B., was one of sixteen Canadian surgeons accepted as Fellows of the American College of Surgeons at the annual convocation in Chicago. Many of his friends at Stellarton and throughout Pictou County will be glad to hear of Dr. Baxter's recent honour.

Dr. O. B. Keddy, Mayor of Windsor, recently visited Boston where he visited the Lahey Clinic and other Hospitals.

Dr. A. C. Gouthro of Little Bras d'Or underwent an operation for appendicitis at Harbor View Hospital during the first week of October. The doctor made a good recovery and plans to return home shortly.

The new Halifax Infirmary held its first graduation exercises for nurses on the afternoon of October 23rd. There were nine graduates—Miss Marie Emma Brasset, Antigonish; Miss Mary Dorothy Turner, Halifax; Miss Grace Aleta Hurst, Halifax; Miss Beatrice Mary Foley, Newfoundland; Miss Mary Helen Halliday, Truro; Miss Marjorie Baker, Bridgewater; Miss Elva Abriel, Pope's Harbour; Miss Hilda Johnson, Prince Edward Island, and Miss Mary Martin, Sheet Harbour. The Rev. Dr. John Burns of St. Mary's Cathedral presided. Dr. J. W. Merritt of Halifax gave the address to the graduates. Rev. Dr. Charles Curren and Dr. G. H. Murphy also spoke.

Dr. G. H. Murphy recently attended the annual congress of the American College of Surgeons which was held at Chicago. Dr. Murphy formerly was a member of the Board of Regents.

Banquet to Dr. M. A. B. Smith, Dartmouth, N. S. Honouring Dr. M. A. B. Smith, for having completed this year his fiftieth year as a medical. practitioner in this Province, members of the Halifax Branch of the Nova Scotia Medical Society tendered the veteran teacher and practitioner a banquet on October 11th in the Nova Scotian Hotel. Dr. H. B. Atlee, president of the society, was in the chair. Dr. K. A. MacKenzie outlined some of the main features of the life of Dr. Smith and paid a fine tribute to his service to the public. He was born seventy-three years ago at Montague, P. E. I. Graduating from New York University, he was allied with the Victoria General Hospital for thirty years as teacher and staff member. Dr. Smith made a fitting response telling of interesting episodes in his career.

The many friends of Mrs. and Dr. H. K. MacDonald will regret to learn that it was necessary for Mrs. MacDonald to undergo an operation at the New

England Baptist Hospital at Boston. We are pleased to learn, however, that Mrs. MacDonald is now at home and that she is regaining her health.

The BULLETIN extends congratulations to Dr. and Mrs. R. F. Ross of Elmsdale on the birth of a daughter which occurred on October 13th at the Grace Maternity Hospital, Halifax, N. S.

Dr. A. F. Miller, Medical Superintendent of the Nova Scotia Sanatorium, gave his first lecture on October 20th to the final year students of Dalhousie on Tuberculosis, at the Victoria General Hospital, Halifax. Dr. Miller has recently been appointed an extra-mural Professor in Medicine at Dalhousie University.

A Doctor was examining a man who had come to him for the first time. Satisfied at last, the doctor looked at him gravely. "You are in a bad shape," he said. "What you need is a sea voyage. Can you manage it?" "Sure, easy," replied the patient. "I'm second mate on the Anna Marie just in from Hong-kong."

The graduating exercises of nurses was held at the Children's Hospital, Halifax, on the evening of October 25th. Mr. O. E. Smith, the Chairman of the Board addressed the graduating nurses, as also did Miss Winslow, Dr. A. E. Doull and Dr. H. G. Grant. The nurses receiving their diplomas were as follows: Ruth Evelyn Ayling, Debert; Erna Margaret Chittick, Sheet Harbour; Margaret McKinnon Gamester, Bridgewater; Pauline Inez Gordon, Melvern Square; Pauline Balcom Publicover, Halifax; Catherine May Mahon, Halifax; Zylma Mede Mason, Hillsvale; Bertha Alice Drake Mosher, Dartmouth and Jean Vanstone Simpson, Antigonish.

Dr. J. C. Morrison of New Waterford has been appointed a member of the Board of Trustees of the New Waterford General Hospital.

Dr. and Mrs. E. M. McDonald of Sydney were recent visitors in Halifax.

Dr. Harvey Sutherland who has been practicing medicine at Canso has moved to Guysboro.

Dr. Harold Ratchford of Inverness is taking a post-graduate course at the Mayo Foundation in Rochester, Minn.

Dr. O. R. Stone of Bridgetown has returned from Montreal where he has been taking a post-graduate course in Surgery.

Fitting.—Graduate: "Professor, I have made some money and I want to do something for my old college, I don't remember what studies I excelled in, if any." Professor. "In my classes you slept most of the time. Graduate. "Fine! I'll endow a dormitory."

Dr. A. F. Miller of Kentville recently gave an interesting and instructive address before the Cape Breton Medical Association at Sydney. In his introduction he referred to the beauty of the Island and the splendid inheritance of the people. He deplored the loss, especially in the youth of the country,

from tuberculosis. Dr. Miller pointed out the reduction in mortality from tuberculosis during the last few decades due to improved sanitation, better hygiene in the homes, and, in the last twenty years, to the establishment of sanatoria, public health clinics and nursing supervision of those suffering from tuberculosis. He referred to the good work at present being carried out in our province and made a plea for a greater effort on the part of all to help bring tuberculosis further under control.

Doctor makes legs longer. At the meeting of the American College of Surgeons at Chicago, Professor Vittorio Putti of Bologna described the process of lengthening legs of cripples.

The new procedure, said Prof. Putti makes it possible to lengthen deformed legs with much success. The instruments used are bone-breaker weights and piano wire. Prof. Putti has been able to lengthen legs as much as three inches, he said. Putti breaks the leg obliquely, inserts piano wire in the bone to hold the two ends in line, pulls the lower end out with weights at the thin fracture openings and gives the leg its normal length. The job takes twenty days or about the time necessary to heal an ordinary fracture.

THE ONLY WAY.

An Editorial.

The people of Nova Scotia have the word of Dr. A. F. Miller, Medical Superintendent of the Kentville Sanatorium, that *a great and crying need in this Province is free treatment for the tuberculous poor.*

While there is now a bed capacity of 544 at the Sanatorium, only about 300 patients are under treatment there, and Dr. Miller points to this as a significant fact. "We are still having about 500 deaths a year from tuberculosis in Nova Scotia," he says, "a rate of 100 for every 100,000 of our population. *Therefore, by proven figures, we must certainly have in Nova Scotia some* 3,000 *persons who should be under our care.*"

All who have given this matter serious thought realize, as Dr. Miller says, that "personal charity is too haphazard, too unevenly divided and, in short not the way to do this work properly." The care of these unfortunates must no longer be left to any haphzard methods, and the demand is for a concerted effort among all governing bodies in the Province to insure adequate treatment for all sufferers from this dread disease.—*Mail, Nov. 19.*

Report on Tissues sent for examination to the Pathological Laboratory, from October 1st to October 31st, inclusive.

The total number of tissues sectioned 115. In addition to this 25 from 5 autopsies were sectioned making 140 tissues in all.

Tumours malignant	22	
Tumours Simple	4	
Other conditions	77	
Awaiting section	12	115