CONTENTS

Uterine Fibroids and Pregnancy

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TWENTY years ago, in my time as a medical student we were taught that a uterine fibroid called for surgical intervention only where it gave rise to one or more of the following conditions:

(a) Pain.
(b) Prolonged or excessive uterine bleeding.
(c) Mechanical embarrassment by reason of its size.

Unless one or more of these conditions were present it was held that the uterine fibroid was absolutely harmless to its host, and did not justify the risk of surgical extirpation.

Since that time the pendulum has swung through a long arc, until to-day we find those who assert, and who support their assertion by a mass of reasonable evidence, that practically every fibroid, even though inconsiderable in size, produces a varying degree of toxaemia, with a resultant anaemia, and hence should be dealt with surgically once its existence is recognized.

Quite naturally the uterine fibroid presents its most serious problem when encountered complicating pregnancy and labour. Both maternal and infant mortality are greatly increased.

In nineteen years of practice, I have encountered five cases of uterine fibroid of which I have been aware, complicating pregnancy. There may have been, doubtless there were, others the existence of which I was blissfully ignorant, where pregnancy ran its undisturbed course, and delivery was accomplished without mishap. Two of the five cases which were diagnosed went through two pregnancies with normal delivery. In both patients the fibroid was high up on the body of the uterus, subperitoneal in type, did not enlarge appreciably during pregnancy, and caused no complication during or after labour, save that one of them in both deliveries, showed rather free post-partum bleeding, but not reaching an alarming degree.

The other three cases were as follows:

Case No. 1.

Mrs. C. An apparently healthy woman aged 23. Menstrual history normal. Married at 20, and had one healthy child. First came to me with history that menstruation had ceased eight months previous, abdominal enlargement had been gradual and progressive, but that she had not "felt life". This case occurred early in my practice, and looking back on it I well realize how inefficient was my examination and how badly I was at sea.

One week later I was called to patient's home at 2 a. m. as she was in labour. On arrival I found that she was having fairly strong pains lasting one minute, and recurring at six minute intervals. She told me there had been a discharge of water. Vaginal examination showed a thickened, spongy cervix with very little dilatation. Administered morphia gr. $\frac{1}{4}$ hypodermically and returned home. Summoned again at 2 p. m. the same day. Pain had been re-established at 10 a. m. Not much change in cervix. Was called again to patient at 10 p. m. Pains were much stronger and patient was

showing signs of tiring out. Her sympathetic relatives were quite sarcastic in their references to my management of the case, and plainly hinted it was high time to deliver the goods or make way for a more experienced obstetrician. Secretly I quite agreed that they were 100% correct, but putting on an air of confidence which I was far from feeling, assured them that with a little patience they would soon be fondling a bouncing baby. Vaginal examination now revealed a conical shaped mass protruding from the cervix about one and one-half inches. There was no bleeding. By this time the unusual hardness of the uterus all the time, the fact that it did not grow harder with each pain and rise forward in the abdomen, as in characteristic labour contractions, began to impress themselves on my mind, and for the first time, I realized what I should have realized a week earlier when I examined this woman, that I was dealing with a large uterine fibroid.

I was rather regretful that I had promised that fine, bouncing baby with such assurance. Grasping the mass protruding from the cervix with ring forceps, and making slight traction, it slid away quite easily. It was a cylindrical, cigar-shaped body, rolled up on itself, and when unfolded was 5 inches in longest diameter, 4 inches in widest, and ½ inch thick at centre. It had the typical appearance of placental tissue. Exploring the uterus with gloved finger, I found the walls firm and hard and the cavity just large enough to contain the "spurious placenta".

So my worrisome maternity case turned out to be a rapidly growing fibroid simulating pregnancy, even to the extent of producing a spurious placenta.

On the following day patient was tender to pressure over the enlarged fibroid, showed moderate elevation of temperature and pulse rate, and was rather restless. Removed to hospital. Following morning, pulse rate was still further increased and patient was definitely toxic. Operation was decided on, and supra vaginal hysterectomy carried out. Toxemia cleared up rapidly and convalescence was uneventful.

Case No. 2.

Mrs. C. age 32. A large, exceptionally healthy looking woman, came to my office for advice when she was three months pregnant. Had been married six months. Menstruation always normal and had ceased three months previous. Felt well in every way. Ten days later I was called to her home. Patient was in bed, very restless, with some abdominal pain. Temp. 100. Pulse 110. Inspection and palpation of abdomen revealed a rounded firm mass rising to level of umbilicus, rather tender on pressure. Bimanual examination gave a clear picture of a rapidly growing fibroid complicating pregnancy. Transferred to hospital. Exploratory laparotomy revealed a large fibroid in neck of uterus, with pregnant uterine body perched atop, "like a lantern on a cathedral dome", as one writer has described it. Supravaginal hysterectomy was performed. Although patient was very positive menstruation had ceased three months prior, the foetus was unquestionably four and one half months advanced.

At the time of doing this operation I was not aware of the warning of some authorities, never to do an appendectomy at the same time as a hysterrectomy. Consequently, after the peritoneal toilette of the pelvis, discovering an unusually long and tortuous appendix, appendectomy was performed. Whether or not from this cause, the patient gave me a very anxious week. A large pelvic abscess formed and I used the cervical canal in the uterine stump

as a route to introduce a drainage tube, after which convalescence was rapid. *Case No.* 3.

Mrs. X. Age 34. Married at 28 and had four children. I attended patient in last two confinements which were normal in every respect. Called to see patient about 8 p. m. Found her in bed, very restless, vague abdominal pain, temp. 100, pulse 100 and of good quality. Smooth, rounded, hard tumor in lower abdomen, tender on pressure and reaching nearly to umbilicus. Menses had ceased just 4 months previous. With experience of case No. 2, I had no hesitation in diagnosing a rapidly growing fibroid undergoing degeneration. Gave symptomatic treatment and arranged for removal of patient to hospital following day.

Returning from a call about midnight of same night, my way took me by this patient's home, and seeing both floors unusually lighted I dropped in. They were just on point of sending for me as patient seemed worse. The change for worse in patient's condition in those four hours was almost unbelievable. Temp. had risen to 102, pulse to 140, very thready and of wretched quality. Patient was extremely weak and restless. Removed to hospital at once and prepared for immediate operation. She was practically moribund going on table. Hysterectomy performed. Saline sub-mammary and fluids per rectum administered.

The rapidity with which this woman shed her toxicity was no less striking than that with which the toxemia had manifested itself in a few hours before operation. In 36 hours after leaving operating table her pulse and temp. were normal, there was no vomiting nor abdominal distention, and convalescence was particularly smooth.

Now, three cases constitute a very small series from which to draw deductions, but with the experience of these three cases, I have no hesitation in subscribing whole-heartedly to the dictum that the uterine fibroid, in the woman of child-bearing years, is not the innocent, trustworthy tenant it has been painted, that it should receive no mercy, but should be evicted surgically once its presence is recognized.

Before and After Operation.

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NO matter how brilliant an individual surgeon might be if he approaches a case which is poorly prepared and followed by indifferent post-operative care the result cannot be expected to be good. Sir Berkeley Moynihan says, that "surgery has been made safe for the patient—we must now make the patient safe for surgery".

My main object in presenting this paper is to discuss in general the proper preparation of a patient for operation and the pre-operative and post-operative complications, their recognition and treatment.

It should be a rule that all patients to be operated on, excluding emergencies, should be in the hospital at least twenty-four to thirty-six hours prior to operation, so that a thorough check up of the various systems may be done. The giving of quantities of fluids for some days previous containing glucose and alkalies so that any approach to acidosis may be avoided is generally followed nowadays.

Catharsis—We generally give a cathartic two nights prior and a small enema the evening before operation. Pre-operative catharsis depletes the system of the necessary fluids, distends and irritates the bowel, predisposes to abdominal inflation and gas pains and interferes with peristalsis. In poor surgical risks adequate carbohydrate nourishment is necessary, for e. g. the patient may be given barley-sugar without limitation. Great improvement can be brought about in patients with bad hearts by the intravenous injection of glucose.

Sterilization of the skin—Iodine still seems to be the most universally used antiseptic for sterilizing the skin although it has been conclusively proven according to tests carried out by Raisiss, Severac and Maetsch, that Metaphen in 1 in 2500 dilution was found to produce 100% sterilization, while 7% iodine and 2% Mercurochrome sterilized at 5 minute intervals to the extent of 70% and 50% respectively. If water has been used on the skin it is useless to apply iodine for some time afterwards as the water causes a swelling of the surface epithelial cells and so prevents any penetration by the iodine.

Coagulation of the Blood—It is frequently necessary to operate on those suffering from jaundice or who have a history of bleeding and the surgeons main efforts are directed to preventing post-operative hemorrhage or undue bleeding at the time of operation. An injection on three successive days immediately before operation of 5 c.c. of a 10% solution of Calcium Chloride, considerably lowers the coagulation time of the blood and has been found fairly efficacious in preventing bleeding. Small transfusions of blood also improve the clotting time.

Shock—A clinical term applied to a condition of general depression of the vital functions; the term collapse indicates a severe degree of the same condition. Shock is most common after hemorrhage, severe injuries and operations or in toxaemic states. Immediate, or primary shock is seen where the injury is severe and the patient under the influence of fatigue, hunger or exposure at the time of its infliction. Delayed, or secondary shock is more

common. The clinical features are those of a depression of the circulatory system. Pulse rapid, and of a small volume; the blood pressure low, and falling; the skin is pale or cyanosed, and sweating; temperature sub-normal; respiration is rapid and shallow, with occasional deep sighing respirations; limbs flaccid; the mental state is profoundly apathetic. The essential feature in shock is a deficiency in the volume of blood in active circulation. In haemorrhage there is an actual loss of blood to the body. In pure traumatic shock, there is no loss of blood from the body, but there is an enormous dilatation of the capillary bed, so that the patient may be described as bleeding into his own capillaries. Histamine and allied substances can be identified in extracts from damaged tissue, and injection of these extracts will produce shock. Previous hemorrhage, anaesthesia with ether or chloroform increases the susceptibility of an individual to histamine. The shock of toxaemia is due to the action of these substances. The treatment of shock must be regarded both from the point of view of prevention and of cure. The avoidance of post-operative shock, depends in the main on the avoidance of tissue damage; rough handling, haemorrhage, exposure and drying of the tissues, sepsis, or the use of strong antiseptics, all cause tissue damage and favor the production of shock. Next the avoidance of the loss of fluids, especially of blood; loss of body heat should be guarded against and care taken that the patient is not fatigued, starved, or frightened before operation. The choice of an anaesthetic is also of great importance in one who is already shocked; gas and oxygen, combined if possible with local anaesthesia is probably the safest medium. The chief requirement for the treatment of shock is the addition of fluid to the circulation. In mild cases water by mouth and bowel. If shock is pronounced fluid is best given intravenously as normal saline. In very severe shock where the permeability of the vascular endothelium is increased, the fluid thus added is lost immediately from the circulation and only serves to increase the oedema of the tissues. The critical point is when the systolic blood pressure goes below 80 mm. Under such conditions either blood or 6% solution of gum acacia in normal saline must be given intravenously. (Tested gum solution ready for injection can be procured). If shock is produced by hemorrhage it is almost invariably fatal to restore the blood volume with solutions of saline or sugar. The Insulin-Glucose treatment of shock is claimed by some workers to have advantages over the glucose alone. Glucose administered alone may not supply the energy needed quickly enough to revive the dying cells. The introduction of insulin causes a rapid oxidation of the glucose and supplies the energy needed. The amount of insulin used is one unit of U.20 for every three grm. of glucose. As long as glucose appears in the urine there is no danger of an insulin reaction. This treatment has also been found useful in the persistent vomiting of acute peritonitis. Operation should be delayed if at all possible in cases suffering from severe shock, particularly, traumatic or shock due to the loss of blood. I firmly believe many lives have been lost in the past, through excessive zeal on the part of surgeons. e. g.—ruptured ectopic is brought to the hospital, in severe shock, rushed to the operating room and operated on within the hour only to find that all bleeding has stopped and it would have been perfectly safe and desirable, to delay operation and give the patient a chance to recover from her shock, and then operate at a time when the patient is in a much more favourable condition. The same applies in emergency traumatic surgery, it is

generally wise to wait, combat the shock, and then operate under more favourable circumstances.

Acetonaemia—This condition occurs most frequently in children, and it should be a rule that the urine of all children to be operated on be tested for acetone, and if present operation should be delayed. We have several forms of Acetonaemia.

(1) Physiological Acetonaemia.—This may arise from a temporary inadequacy of the metabolic processes. Maybe the child has been taking too little food, or in unusual forms, too much fat or too little carbohydrates. This condition is not of serious import and will clear up rapidly by the giving of glucose.

(2) Acetonaemia often occurs as a secondary accompaniment of a more serious disease, owing perhaps to some toxaemia present or to the starvation which the disease or its treatment has occasioned. The treatment here is that of the original disease, along with the administration of alkalies and easily assimilable carbohydrates.

(3) Acetonaemia may be a cardinal symptom of various forms of toxaemia and in such cases the early recognition and prompt treatment of the acid poisoning is all important.

(4) Post-Anaesthetic Acetonaemia—The administration of chloroform, ether or any general anaesthetic always induces some degree of temporary acetonaemia; this may lead to acid intoxication and it may be fatal, unless the kidneys are able to respond to the increased formation of acetone bodies by a corresponding increased secretion. Chloroform is much more dangerous than ether. When Acetonaemia and symptoms of acid intoxication are found after an anaesthetic, the prognosis must be guarded. If the patient has ever suffered from attacks of recurrent vomiting, special precautions should always be taken. If there is any reason to anticipate danger from anaesthetic poisoning, the following precautionary measures should be taken.

(1) For two or three days prior to operation, bicarbonate of soda in sufficient doses to render the urine alkaline.

(2) The fat in the food should be diminished as much as possible and give plenty of carbohydrates.

(3) A few ounces of 10% solution of glucose, given by mouth, several times daily, and two hours before operation give an enema of the same solution.

(4) Guard the child carefully from excitement, anxiety and fright.

(5) If Acetone is still present in the urine be sure that the acetonaemia is not of the acute and dangerous type before advising operation.

Alkalosis—This condition may occur as a pre-operative or as a post-operative complication. The pre-operative group comprises mostly those cases of pyloric or duodenal obstruction, or cases of peptic ulcer which have developed alkalosis under the alkaline regime. Many patients with high intestinal obstruction may have a condition of alkalosis and in these cases alkalies are contra-indicated. There is a coincident fall of blood chlorides and decrease of chlorides in the urine, so that much benefit is derived from the intravenous injection of chlorides in cases of high intestinal obstruction. Persistent vomiting, evidence of marked dehydration, diminished urinary output, the presence of uraemia or tetanoid tendencies are the clinical manifestations of this condition. Blood chemistry changes are more constant; essentially, there is a fall in the blood chlorides, a rise in the blood nitrogen and

the carbondioxide combining power of the blood plasma. The treatment consists in repeated gastric lavage to relieve the stasis, and normal saline and 10% glucose to combat the depletion of chlorides and the renal insufficiency. If alkalosis persists in spite of this treatment, jejunostomy may be indicated. Alkalies are absolutely contra-indicated—this is mentioned because of the wide use of sodium bicarbonate in cases of persistent vomiting.

Pre-anaesthetic narcosis—This is mentioned because to my mind, in this twentieth century, to take a nervous person into an operating room, without some preliminary narcosis is not only inhuman but is absolutely unnecessary. The plan which we have followed in our hospital during the last two years, is to give the patient three grs. of Nembutal the night before operation to insure a good rest, then one hour before operation we give a hypodermic of morphine sulphate gr. one-sixth to one-quarter and hyocine grs. one-two hundredth to one-one hundredth together with three grains of Nembutal. If hyocine is contra-indicated atropine grs. one-one hundred and fiftieth is given. Most patients go to the operating room somnolent and have no recollection of events just prior to operation. We also find these patients take much less ether. Occasionally this treatment does not work, but our results have been sufficiently satisfactory to continue its use.

Post-Operative Vomiting—In the ordinary case this should be the exception rather than the rule; a patient who has thorough pre-operative care should not vomit, and if they do it generally means in our cases, that some more serious complication is making its appearance. Gastric lavage is the best treatment for ordinary vomiting.

Post-Operative Distention—This still remains a troublesome feature in some cases, but much has been done to relieve this condition by the use of Pitressin. If the tone of the intestine can be maintained during the first three post-operative days, in other words, through the atonic period, the smooth muscle can then resume its normal function. One dose of Pitressin is given pre-operative and followed by three to ten doses every four hours following the operation. This has worked well in the few cases in which we have used it, particularly following gall bladder and suppurative appendix operations. After an operation when it is necessary to give morphia, as it often is, I generally give a small dose of Pitruitrin along with the morphia; this seems to act well and I find the intestine regains its tone much quicker than if the morphia were used alone.

Ileus—By ileus we mean intestinal distention and paralysis without mechanical obstruction. Tyrell Grey describes two types. (1) Active—due to a reflex through the sympathetic nervous system inhibiting peristalsis, well seen in acute appendix. (2) Paralytic—due to rising venous pressure in the bowel wall and consequent passage first of gasses, then of fluids into the lumen of the bowel. In active ileus it is useless to give aperients until there are signs that the bowel is recovering its activities, such as the passage of flatus. In the paralytic type radiant heat should be applied to the abdomen. The stomach should be washed out—morphia, not a purgative, is indicated. In severe or dangerous looking cases a spinal anaesthetic will induce a free action of the bowels; or a temporary enterostomy may be made. An intravenous injection, about 500 cc. of a 5 or 10% NACL solution in freshly distilled water to which is added 10% Glucose should be given.

Unexpected Post-Operative Deaths—

Post-Operative Pneumonia—Opinion is still divided as to the exact cause of this very dangerous sequel. On our present information, the following rules if carried out will tend to lessen the occurrence of this complication.

(1) Avoid as far as possible operating on persons with bronchitis, or operate with local or spinal anaesthesia.

(2) Carefully guard against inhalation of vomit.

(3) As little moving through cold corridors on the way back to bed as possible.

(4) No drainage tubes just under the liver to impede its descent; no tight binders.

(5) After returning to bed, prop the patient up when possible, and coax him to draw deep breaths as soon as possible.

Pulmonary Embolism—Many cases diagnosed as pulmonary embolism are really sudden cardiac failure. Massive embolism occurs within a week after operation. The treatment is largely prophylactic.

(1) The pre-operative preparation most employed is directed to the cure of focal infections, as teeth, tonsils, sinuses. Digitalis should be given if the pulse is small.

(2) At operation, use no constrained position, avoid pressure anywhere on the body. Rough clamping or packing in of sponges is undesirable.

(3) Post-operative care.—Tight bandages around the hips, with pressure on the femoral vein, or tight abdominal dressings should be avoided. Change the patient's position in bed frequently. Free muscular action and well balanced respiration are the most important factors in maintaining efficient venous circulation.

The organization of research and the improved system of keeping records together with the easy inter-communication, have greatly enhanced the sources of information available for the medical man, and also makes this information more accurate and scientific. To these, must be added certain factors of our social life—the improvements in the matter of transportation, the motor car and the telephone have increased to a certain extent the length of the doctor's working day. Lastly, the advent of the trained nurse—for many of the duties that were formerly performed by the physician, have been relegated to her, and as a consequence the physician is enabled to see a greater number of patients and has a wider experience in actual sickness than he could ever have hoped for in by-gone days.

But let us not sound too jubilant a note of victory. There are many high topics of medicine, to our shame, be it said, that we know as much or as little about as did Hippocrates. And it behooves us—as individual members of the noblest profession known to man "to press on toward the mark of the high calling whereunto we have been called."

Historical Section

MEDICAL RAMBLINGS AND COMMENTS.

Delivered at the regular monthly staff meeting, Harbor View Hospital, Sydney Mines, N. S.

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CHANGE, ceaseless change, is seen about us every day; in the shore line about our coast—here the tearing down process is conspicuous; there a building up of beaches and sand bars; the pick in the coal mine giving place to the machine cutter; the "Horse and Buggy" on a moonlight night of our early years to the automobile and a suitable parking place regardless of moon or weather; and so on in almost numberless ways.

Nor is this changing scene confined to the material things about us and our methods of utilization; it goes much deeper; it is quite as striking when viewed from the mental or psychological side, as noted in our outlooks, attitudes, reactions, standards of thinking and acting, habits and customs.

These changes do not all come at once, and they come so gradually, like grey hairs and a very sizeable waist line, that our consciousness of their coming and their significance is not fully awakened until they are well established (for better or worse) until some circumstance or friend points to the fact which then and there is recognized as self evident. It is good to "Take Stock".

On looking at things medical, we find a picture and processes corresponding to what has just been outlined.

Age has not laid its hand on me so heavily that I am just reminiscent—but we must take a backward look and note some things here and there to better understand the way by which we came, our present position and status, the quality of our standards and service, how we can improve our minds and methods and better adjust ourselves to the ever increasing form and complexity of our professional and social relationships, and finally to more intelligently scan the Eastern Horizon of the future and its rising Sun with greater hope and confidence.

The foundations of medicine that have endured unshaken to the present time and will continue, were laid by men who were keen and correct observers, and logical thinkers, as they interpreted the symptoms and signs revealed to and sought by their senses. They were the real clinicians. They depended on sight, smell, hearing, tactile sense and sometimes taste. There were no laboratories and the trappings of science in those days, but those men were scientific in the best sense of the word and did not know it. The searchlight of pure science in later years confirmed the soundness of the principles they propounded. We call them the great men of the past. They merit our admiration, and the high honor we accord to them. There were no laboratory aids nor short cuts to diagnosis,—but it is self evident that one can be scientific without the paraphernalia of science, and it is also true that it is possible to have a laboratory possessing an array of the things belonging to science and yet be more or less scientifically barren. The Soul of Science, seeking truth

by correct means and methods, must be there as the dominating force to make it helpful and trustworthy.

Some of those great men sought the truth by experiment, to add to the sum total of medical knowledge and pure science as it developed gradually and became applied to medical problems, and I can well recall, as a medical student, how limited and sporadic was the application of pure science to our problems. How few were the microscopes in those days and how few were able to and did use them. There is living and active to-day, so I am informed, the medical man who brought the first clinical microscope to the United States for use in medical work.

With the coming of cellular pathology, in 1858, there was a broadening vision, and a new interest, but it took a long time for this and such like to develop into a practical and helpful form for the practitioner in general. It seems as yesterday when our own Osler was quietly laying the foundation of a new system of medicine and practice by correlating his clinical work in the Montreal General Hospital with the appearances and conditions of diseased tissue by post-mortems and the dissection and study of the parts removed. He had but a make shift post-mortem room, and many of his dissections were made in a barn loft. Those were still the days when opinion, formula, and some quoted authority dominated the field of practice. Most of us can recall at an even later time, the simple medical customs, methods and manners, equipment and even simple nomenclature employed in general practice. Every medical man was more or less a king in his own domain. He was at least an individualist. There was no such thing as clinics, group practice and public health centres, or organized preventive medicine. There was but one general hospital in this Province and that of the simple kind then prevailing everywhere. The only vaccine we knew was for small pox but we had a real Pharmacopia and real druggists compounded real medicines, and old women not inclined to sobriety did the nursing.

Pathology and morbid anatomy gave an impetus to medicine. It clarified our vision in regard to the nature of many diseased conditions and proccesses, and broadened the medical horizon greatly, and what shall we say of the remarkable changes wrought in so many diverse lines of medical thought and action with the development of bacteriology, which in our early days was but in its infancy. Pasteur and Koch may be called its founders (the former died in 1895 and the latter 1910). Some of us recall it as a thing of interest to the laboratory man—and the interest of the general practitioner in it was mainly in the abstract, and we treated the fevers caused by the various micro-organisms, under such names as "Putrid Sore Throat," "Slow Fever," Fever and Ague, etc. We have lived to see all this pass and we are not satisfied in any case to-day until we have named the specific organism causing the sickness, and the public demand no less of us. Here let me remind you that immunity which we once heard of in a casual way, or knew only as defined in a dictionary, is to-day a practical question of every day medical practice; for out of bacteriology has grown the science of immunology and serology and we have our vaccines and sera for immunization against microbic diseases, and also as a curative measure bacteriology and its outgrowths made the remarkable surgical achievements of to-day possible, through Lister's recognition of micro-organisms as the cause of suppuration and failure of wounds to heal, and his application of the "Antiseptic Principles" he enunciated. It

is also the foundation of preventive medicine already organized and recognized as having tremendously important social as well as medical aspects.

Stop for a moment to visualize the tremendous changes that have come in rapid succession in my own days. The prostatic had to live a catheter life as best he could, the average expectance of life under these circumstances being two years.

Conditions of the urinary tract were hopeless of exact diagnosis generally speaking and in most cases expectant treatment and alleviation of the symptoms was all we could accomplish. To-day with the use of cystoscope, X-ray, and the laboratory combined, practically every condition can be determined with exactness and dispatch, and the proper line of treatment established before too much damage has been wrought.

Appendicitis was labelled Inflammation of the Bowels and a "fly blister or a poultice" was the main treatment. At a later period surgery was employed only as a last resort when the body was overwhelmed with toxins and dissolution actually in progress. The practice of medicine and surgery was carried out in the homes and there was little or no skilled nursing. It was the best we had, it was the best we could do under the circumstances. It is horrible to contemplate, however, as we look back and view it in the light of present-day conditions and practice. The few examples just given suffice to indicate the picture as a whole. You will add to it in the discussion to follow I hope.

We cannot pass without a reference to individual men who, in recent years, have changed our attitude, outlook and practice, through things they have builded into the medical structure. Two examples must suffice, from the many:

(1) Sir James MacKenzie, who based interpretation and practice on function of the organ, rather than morbid anatomy. The former relates to the beginnings and course of the disease; the latter dealing but in end results of disease. This conception has brought to us greater clarity of vision, a new spirit of confidence in treatment and improved results. This principle is applicable quite broadly to other than cardiac conditions, to which he primarily applied it.

(2) The name of Banting is, I am sure, also in your minds and you are contemplating with me the results of his great work. What a revolution! What results! Light given in the dark places. Hopes realized and our opportunities for better service to mankind increased.

We truly live in a new world of medical thought and practice. We stand dumb with amazement as we note the remarkably diversified and far-reaching changes these things have wrought;—the end is not yet and the possibilities of the future are visualized as still greater. The various scientific laboratories are active as never before along many lines. They have contributed much to our medical growth and advancement along practical lines and we have reason to hope for much more.

The result of what I have but barely indicated in outline is to be seen in our province to-day in the hospitals, sanatorium, and hospital annexes for cases of Tuberculosis, a Department of Public Health and its laboratory service, clinical laboratories and X-ray services, and the form character of medical practice with which we are all familiar.

Within the space of a few years our people have become so hospital-minded that they have now sixteen or eighteen well organized hospitals in operation and many of them with X-ray and laboratory services of good efficiency.

These hospitals came as agencies for the care of sick—and it is to-day within recent memory when many looked upon the hospital as the portal to the undertaker. How the attitude has changed! To-day the hospital is their first thought when sickness or accident overtakes them, nay more, the Community Hospital has already become in great measure the Health Centre for the community and it is bound to become even more so in the future. The evolution of the hospital and its expanding services has made possible the splendidly trained nurses it is our good fortune to have. They are not only well trained, but as a group of fine and noble young women one can challenge the world to beat them.

Another result is the passing of individualism in medical practice. The hospital service and the application of science to our medical problems from so many angles makes team work a necessity—and we work more on the family principle. It is a good thing for us as men, and as a profession, binding us together as a harmoniously co-operative unit, impelling and inspiring us to keep step in the march of progress not only in our advancement in medical knowledge and the improvements in application and technique, but in our outlook on and attitude, in respect to *service*—a service which is ours to give, and to direct along proper lines.

We are now so intimately linked as a profession with the hospital and its work, that we must as a group and as individuals as never before look upon it as our business to consider the interests of the hospital every day and on every occasion, with as much concern as the board of management and the executive heads.

We can think and do things every day that will be helpful in connection with economic and service problems and the maintenance of a fine hospital spirit and standard.

Scientific equipment and its operation is so expensive and so soon needs replacement that one wonders where the funds are to come from to provide the needs. These needs are yearly increasing. It is this side of the hospital service that has in recent years, added so greatly to the per diem cost to the patient and in these days it is a matter of concern for the medical man as well as for the hospital and the community, and though in touching on this I have digressed a bit from the main topic, one cannot refrain from asking one and all to give it their best thought. After all it is a part of the picture of medical life and practice as we have it to-day,—and may be fittingly set in contrast with the picture we knew not many years ago.

May I now make one or two observations aside?—and say that while Science has proved its worth in our professional life and work by its achievements, and while we admit its value and the necessity of it, and hope for further light and help from it, we must not let our enthusiasm over the laboratory and scientific tests and things seen on slides and in test tubes chill our soul in regard to the human factor; the combination of a body and a thinking and feeling mind which we call the patient. Regard for the human factor was always an outstanding feature, our heritage from the past. It must not be lost.

The laboratory should not be used as a short cut to diagnosis. It can never be a substitute for the time honored method of bedside investigation by sound methods of questioning and physical examination. It is by this old method, calling for time and patient and diligent effort, that you develop strength in your professional work. Then again it is obvious that the more laboratory minded you become, the more you rely on the laboratory to the exclusion of bedside observation, the more and more you develop the features of the research worker thinking in terms of cold facts in the abstract. We can and must, however, make the laboratory with its microscopes and test tubes serve us here and there to supply facts not obtainable at the bedside, which can be given their place in the diagnostic picture, or we can utilize it for purposes of confirmation; but at the same time never fail to be pre-eminently Physician to the patient and not simply a diagnostician and prescriber of a something for the disease. The patient needs your understanding mind and kindly heart and the attitude and word that sustains through the hope and confidence it inspires.

In my deliberate ramblings enough passing allusions have been made here and there, I hope, to tempt you to think of and discuss things we can with pleasure and profit recall or visualize as we make contrasts and comparisons between then and now. The points briefly touched upon will at least serve to stimulate each one for himself to build up the picture in detail for himself, that he may more fully realize the tremendous progress and achievement in medicine in a relatively short space of time. Indulge yourselves in a detailed study of the picture you can build. It is a good thing to do, it will give inspiration along with a justifiable pride, a consciousness that the age of medicine in which we live is the most glorious of all time because of what we possess and through it the *service* we can give to meet the increasing needs of our fellow man.

The past and the present taken as a whole, after comparisons and contrasts have been made, inspire us with confidence as we look forward to even more grand and glorious progress and service.

What Time?

Joan's auntie was expected but just when she was due to arrive a telegram came. The child's mother read it aloud: "Missed train. Will start same time to-morrow."

After her mother had put it down, Joan picked it up.

Suddenly she burst into a roar of laughter.

"Isn't auntie really silly, mummy? she said.

"Why, my dear?" asked mother puzzled.

"Well, don't you see," said the child. "If she starts at the same time to-morrow, she'll miss the train again."

The school inspector, to test the faculty of observation in the pupils, crossed the platform, shifting his fountain pen from one pocket to another.

"Now, what did I do?" he asked.

A small girl held up her hand. "You crossed in front of teacher without saying 'Excuse me'," she said—*Selected.*

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BENEFITS OF PREVENTIVE MEDICINE

GREAT advance in the science and art of medicine has been made in the last hundred years. The cell theory, technical methods of clinical examination and the effects of social conditions and industrial occupation upon health were the principal themes of debate in the first quarter of the nineteenth century. Then came the discovery of anaesthesia, resulting in a revolution in surgical treatment and its possibilities. Even greater was the discovery of the germ and parasitic causation of disease, with resulting antiseptic surgery, disinfection, vaccines, antitoxins, etc., etc. In the past few years much study has been devoted to the part played by the internal secretions of the body; X-ray and therapeutic treatment with light and heat, electrical and radium energy. In the past fifty years, great advance has been made in Hygiene and Preventive Medicine.

This advance in medical knowledge increases the potential capacity of man. But mere increase in knowledge, particularly in a knowledge of Preventive Medicine can do nothing in itself to prevent disease and safeguard health unless it be understood, accepted and practised. It must filter down through all sections and conditions of society and must become the common property of all people. It must arrest the attention of the individual, motivated not only by self interest but also by a sense of public duty. True it is, that the progress of medical science is too far in advance of our apprehension to be turned to utilitarian values because the enlightment of the people is not keeping pace with the new science. Our purpose should be to modify the habits of the people affecting public health in response to public taste, well-informed opinions and an awakened civic conscience.

Gains in extending human life and preventing sickness have been really considerable during the last half century. There is abounding evidence to show the success of the public health authorities to prevent illness and to conserve life, and, considered from a purely economic view-point, this work pays large dividends. May we quote statistics regarding public health work in New York, which are typical of what has happened in other centres. In 1875 the death rate was 28.3 per 100,000; in 1925 it was 11.5 per 100,000,

a reduction of 59.4%. A still better measure of improvement is the gain in the average duration of life. In 1880, the average span of life in New York was 40 years. It is now 55 or 56 years, a gain of 15 years in half a century. The infant mortality rate has been cut 60%. In the past, one quarter (25%) of babies born, died during the first year. To-day, only 7% die during the first year. In 1900, the death rate from typhoid was 36 per 100,000 in the Registration Area in New York. To-day, it is not far from extinction. In regard to tuberculosis, the death rate in 1900 was 195 per 100,000; to-day it is less than half as high. At the present time, we are seriously considering the complete elimination of diphtheria. A most striking example is the public health campaign carried on by the Metropolitan Life Insurance Company. Seventeen years ago, it began a program of health education and nursing among its working class members. This organization has expended more than twenty millions of dollars in this campaign. During this period the mortality rate has declined more than 30% and the accumulated saving in mortality has totalled the amazing sum of forty-three millions of dollars. Health work, when properly undertaken and adequately financed, pays by every test of modern business organization.

The public health problem is a community problem. It is no longer possible to separate the health of the individual from the health of the community at large. Conditions of work, play, education, food supplies and transportation which were at one time largely the personal concern of the individual have become community problems and must be solved as such. The State has its responsibility in regard to public education. The best State is that which does most for the individual and enables the individual to do most for himself. The State is not safe unless public opinion is enlightened; opinion and the task of converting public opinion into enlightened opinion requires the best powers of us all. Public opinion is in need of illumination, cultivation and education on the whole subject of the application of preventive medicine which may be made by the individual. In the complexities of modern life, liberation from conditions inimical to health or to the recovery of health has become a social desideratum more than liberty in the sense of freedom from compulsion.

May I suggest that at the next annual meeting of the Medical Society of Nova Society an extra day be entirely devoted to public health problems.

DANIEL MACDONALD, M.D.,
North Sydney, N. S.

Miracle of Surgery is Performed.

Another "miracle" of surgery was reported to-day, when H. H. Watson, 29 years old and blind for 25 years, gradually began recovering his sight through corneas which were grafted on his eyes.

The operation was performed by the noted surgeon, J. W. Tudor Thomas, at the Royal Opthaemic Hospital, last June.

The diseased cornea of Watson's right eye was removed and replaced with a sound cornea from a living blind man who was blind from other causes. A similar operation was performed on the left eye, a sound cornea being taken from a woman afflicted with blindness from a disease which had not affected the cornea.—Special Cable from London, England to the *Mail*, Feb. 1.

CASE REPORTS

ASPIRIN POISONING.

Aspirin is an organic compound, synthesized from Salicylic Acid, itself a synthetic drug. The physiological action of aspirin resembles that of Salicylic Acid, except that its untoward effects on the stomach are relatively slight, the Salicylic radical not being split off until it reaches the alkaline medium of the intestine.

For this reason it is better to administer it in a neutral medium; e.g., a tumbler of water, whereas we usually combine the pure Salicylate with an alkali, e.g., Pot. Bicarb.

The depressing effect upon the heart of Acetyl-Salicylic is not nearly so marked as that of the ordinary Salicylate. Its action on unstriped muscle, however, is decidedly excitant as shown by its toxic manifestations such as, Angio-neurotic oedema, urticaria, vaso-motor spasm, spasm of the glottis, etc.

The toxic dose of Acetyl-Salicylic Acid varies greatly with the individual. In some, very rarely, fortunately, it amounts to an idiosyncrasy. And it is of this, primarily, I am concerned in this article, as three such cases were treated by me during the past two or three months.

Case 1. Nov., 1933.

Male, age 30, well nourished, no medical history of any kind. Purchased a couple of capsules at the drug store for a "cold". These were stock capsules put up by a reliable house and contained 3¼ gr. Aspirin, with a small quantity of Phenacetin and Caffeine. He took these at night along with the conventional hot lemon. I saw him on the following early morning. His temperature was sub-normal, pulse 70, good volume. His face and eyelids were markedly oedematous, large urticarial wheals extended over neck and chest. Oedema extended to the hands and fingers. He complained only of the itching. The urticaria cleared up in less than twelve hours but his face and hands remained oedematous for three or four days. He claimed that the capsules had poisoned him, as he began to feel "queer" fifteen or twenty minutes after swallowing them. I concurred in his own diagnosis.

Case 2. Nov., 1933.

Male, age 27, no medical history of any kind. Seen by me about 8 p. m. He reported having taken two 5 gr. tablets of ordinary aspirin, some hours previously. He had practically the same symptoms as Case 1, and cleared up rapidly under eliminative treatment.

Case 3. Jan., 1934.

Housemaid, age 24, medical history irrelevant, well nourished, intelligent. Her mistress had given her one of the same sort of capsules mentioned in Case 1. When I saw her about three or four hours after, her temperature was subnormal, pulse 120. Her face and eyelids were enormously swollen, urticarial wheals over neck and limbs. Her breathing was stridulous. She claimed that the capsule had poisoned her as her face and neck began to feel "queer" a few

minutes after taking it. She reported a previous attack, following ingestion of one "compound" tablet. At that time only her eyes were affected and this had cleared up by the next day. She was put to bed with hot water bottles and given a teaspoon of spts. Ether Nit., repeated in four hours. In the following morning her temperature was 98 degrees, pulse 52, urticaria and laryngeal stridor had cleared. The oedema persisted for two or three days, and gradually cleared up.

The toxicology of Aspirin is rather obscure so that no specific has been evolved for the treatment of these cases. Symptomatic treatment—Vaso dilators, Amyl Nitrate, Nitroglycerin, Strychnine, etc., would seem to be indicated.

Death has been reported from the syndrome following overdose of the drug. Authorities claim that its combination with quinine is dangerous, others that the combination with any of the coal tar derivatives is more toxic and depressing than when taken singly.

A. K. Roy, M.D.,
North Sydney, Nova Scotia.

Ruptured Small Intestine.

White. Male. Aged 17. Admitted to hospital September 6th, 1933. Gives the following history: While stealing a ride on a coal train passing a projecting platform, his body became jammed between the side of the coal car and the platform. He was picked up some time later in an unconscious condition and brought into the hospital. On his admission the patient was quite conscious and complained of severe pain in the abdomen. He was suffering from a moderate degree of shock, pulse strong and regular. He assumed a characteristic position lying flat on his back, knees drawn well up and thighs flexed on the abdomen. The patient was unable to take a deep breath. Palpation of the abdomen showed a board-like rigidity extending over the whole abdominal wall. There were no abrasions on the body with the exception of a few minor bruises on the upper part of the chest. The patient was catheterized and three ounces of normal urine withdrawn, showing the bladder to be intact. On account of the marked rigidity of the abdomen, it was felt that there was a rupture of some of the abdominal viscera. An immediate laparatomy was decided upon. Previous to operating 500 c. c. normal saline were given intravenously.

Operation: Through a mid-line incision, the abdomen was opened and found to contain a large amount of blood. An attempt was made to swab the fluid out. The liver was first examined for the possibility of a rupture, but found all right. The stomach was in proper position with no signs of a rupture. The whole posterior surface of transverse colon was ecchymosed with four large rents from two to six inches long in serous covering. These rents were stitched over with fine catgut. It was noted that most of the bleeding appeared to be coming from the pelvis. Further swabbing out of blood was necessary and the packing back of loops of small bowel with moist sponges. Low down on the left side of the abdomen a loop of small bowel was completely severed, the tear extending about one inch into the mesentery of the bowel. There were no faecal contents present in abdominal cavity and the severed ends of the bowel were practically occluded from contraction of the muscular coat.

The severed ends were purse-stringed, closed, and a side to side anastomosis performed. The abdomen was closed in layers and two cigarette drains inserted. The bowels acted freely on the third day. The day following the operation the temperature was 100°F, the second day it was 101°F, then it dropped to normal and remained so throughout convalescence. The patient returned home perfectly well at the end of three weeks.

The chief points of interest in this case are:

(a) The absence of severe shock which one would expect to find considering the seriousness of the injury.

(b) The position of the patient, legs drawn up on the abdomen, to lessen any tension on the abdominal viscera.

(c) The nature of the injury. It would appear that the force of the impact was directed against the transverse colon, it in turn was driven against an unguarded loop of small intestine which came in contact with the pelvic brim and caused the rupture. We could almost term it as a rupture by "contre-coup."

(d) The absence of intestinal contents in the abdominal cavity. This might be explained by the force of the blow forcing the contents of the bowel either way from the point of rupture, also by more or less temporary paralysis of the bowel.

M. G. TOMPKINS. M.D.,
Dominion, N. S.

Rupture of Aneurism involving whole Aortic Arch also healed Fusiform Aneurism of the Descending Thoracic Aorta.

The patient was a man of 69, a Belgian, a coal miner, who gave a history of being sick with a "bad cold" and stitch in side for two weeks. The "cold" was better but he was still weak. He was quite pale, short of breath but able to sleep with only one pillow. When asked to sit up he did so rapidly. His voice was of a whispering quality for years. The chest was barrel shaped, the right lung hyperresonant and full of rales especially at the base. The left lung was dull at base and apex posteriorly, with a resonant area opposite the lower half of the scapula. The whole lung was dull anteriorly. It was impossible to define the left border of the heart although the heart sounds were apparently normal. X-ray films on two different occasions gave no help in diagnosis. They showed lung tissue corresponding to area described above, but otherwise the lungs and heart were all one dense shadow. The right border of the heart appeared to be displaced towards the right. Temperature 98.4°F. Pulse 110. Respirations 30. B.P. 130-84. The Kahn test was negative. The urine showed a trace of albumen, a few Hyaline and granular casts, a rare pus cell and a few red blood cells. Due to the haemothorax and his age carcinoma of the mediastinum was the provisional diagnosis. He remained about the same during his three weeks in hospital until a few minutes before his death which occurred suddenly. He complained of being weak, asked for a drink and fell back dead.

Post-Mortem Findings.

When the chest was opened considerable clear fluid escaped under some pressure from the left pleural cavity. The lower lobe of lung was pushed up and the base of the pleural cavity occupied by a large blood clot appearing as if it has been present previous to admission. The upper lobe was so firmly

adherent to the chest wall that separation was impossible. When torn away a large amount of fresh blood escaped. The heart appeared to be smaller than normal and was displaced to the right. The Musculature appeared normal. Just above the aortic valves the aorta began to balloon out so that the whole arch was easily as large as two fists placed together. It was impossible to judge the size of the rent as the sac was torn in attempting to deliver it. The heart and whole aorta were removed en-masse. The specimen showed the lung to be firmly attached to the wall of the sac. Following the descending aorta a second aneurism of the fusiform type was found in the region of the diaphragm, about five and one-half inches long and two and one-half inches across. Its anterior wall was quite hard and when opened was found to be an inch and one-quarter thick and of the consistency of cartilage showing longitudinal lines leading one to believe that repair had been brought about by the organization of different layers of clot. There was no evidence of any inner coat or lining. The aorta throughout its entire length was hard and gritty. The inner surface was studded with calcified plaques.

The right lung appeared to be larger than normal and had numerous firm adhesions to the chest wall. The other organs including the liver and spleen appeared normal.

Hydatidiform Moles.

In general practice hydatidiform or vesicular moles are rare. Within a short time this summer three were expelled or curetted away in St. Joseph's Hospital. These moles are very characteristic and resemble nothing as much as a bunch of pale grapes. They are made up of many small cysts filled with clear fluid and vary in size from a small pea to an almond nut. They are attached to a mass of necrotic material. Hydatidiform moles are the precursors of Chorion Epitheliomas the most dreaded of all malignant tumors. However, not all lead to this as these three women are well six to nine months later. One, Mrs. E. M. being pregnant four or five months.

Case 1.

Mrs. W. C. Age 42. Gravida 5. Youngest child four years of age. First seen two months previous to admission. Gave a history of amenorrhoea of two months duration. Had quite a severe hemorrhage then. Diagnosed as an abortion: improved. From then until time of admission had recurring periods of hemorrhaging. At other times she had a brownish discharge. On admission there was a mass extending almost to the umbilicus especially on the right side. It was felt that this mass or uterus had been larger a month previous.

The cervix was soft and the os somewhat dilated. Under general anaesthesia a tremendous amount of necrotic tissue and grape-like cysts was curetted away.

Case 2.

Mrs. E. M. Gravida 3. Last menses five months ago. Large fleshy woman weighing two hundred and twenty-five pounds. Felt she was pregnant. A month previous to admission began to flow and complain of pain in the abdomen. Treated with morphine and rest in bed. Flow stopped for a few days. Later returned and was brown and watery. On admission flowing

considerable. Given one-quarter grain morphine and vagina packed under general anaesthetic. Removed early next day. That night she complained greatly although the os was only dilated the size of a half dollar. Under general anaesthesia the uterus was emptied of a large typical vesicular mole.

Case 3.

Mrs. P. McM. Age 36. Gravida 5. Youngest child three years of age. Treated three months previous to admission by three weeks rest in bed on account of uterine bleeding. Since then bleeding continued off and on until she had a rather profuse hemorrhage and was sent to hospital. A diagnosis of lateral placenta previa was made as a soft mass was felt to the side of the internal os. Shortly after admission she expelled a large typical mole and had a moderate hemorrhage. The mole completely filled an ordinary enamel basin, the patient was quite shocked at this time, but made an uneventful recovery, as did the others.

In curetting these women one is struck by the large amount of material obtained and by the difficulty experienced in being sure that all has been removed. The latter is next to impossible.

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

Prolapsed Kidney Presenting Gastric Symptoms.

J. H. Male—aged 32—Miner.

Admitted to the New Waterford General Hospital on Jan. 31st, 1933, complaining of pain in the stomach and distress after meals. Pain across the small of the back.

There was a tubercular family history, the father having died of pulmonary tuberculosis and one brother of tubercular meningitis.

Patient had O. D. C. with good recovery. Always in good health previous to the present illness. No serious accidents. Had used alcohol excessively.

The stomach distress, which was the patient's main complaint, dated back about one year and the symptoms were rather indefinite. A feeling of distress and fullness at irregular intervals after meals. Came on in attacks every month or two, and lasted from one to two weeks. Not relieved by alkalies nor by food. Could not say whether one food was worse than another, No vomiting. No constipation. No tarry stools noticed. Slight loss of weight, strength and appetite.

The pain in the back dated back about three and one half years, lately becoming much worse. A dragging pain across the small of the back, aggravated by work and relieved by lying down. No attacks of acute pain and no history of frequency. He had been strapped a number of times and had used liniments and rubifacients to no avail, and now considered the backache a necessary evil, due to his occupation.

On examination the heart and lungs were found to be normal. Liver, spleen, kidneys not palpable, but tenderness was elicited by fist percussion in the right loin. C. N. S. normal.

A gastric analysis showed a slight degree of hypochlorhydria. Nothing else abnormal. No occult blood in the stools on three occasions. W. B. C. count 7,900. Daily urinalyses showed no albumen, pus, blood, or casts. Urine negative for the tubercle bacillus.

On Feb. 10th. a cystoscopic examination was done under caudal anaesthesia. Bladder and ureteral orifices looked normal. Dye excretion was normal on both sides. Pyelograms, however, showed marked ptosis of the right kidney, with acute angulation of the ureter.

On Feb. 16th. patient was taken to the O. R. and an incision made in the right loin. The kidney was found to be prolapsed with the lower pole at the level of the sacro-iliac junction and firmly held there by dense reddish ahdesions. The kidney, which was normal in size and appearance, was freed, the capsule split and sutured to the parietes with the upper pole at the level of the 11th rib.

The patient made an uneventful recovery, and was discharged on March 15th, with no complaints referable to the back or stomach. He has been doing hard work for the past seven months, and has had no recurrence of symptoms.

This case illustrates the fact that stomach symptoms may be directly due to pathological conditions of the kidney, in the absence of organic disease in the stomach.

B. L. MILLER, M. D.
New Waterford, N. S.

Interstitial Pregnancy.

Age, 29, Female, Professional nurse.

Complaint. Pains in lower abdomen with intermittent vaginal bleeding.

Past History. Entirely negative. *Family history* good.

Present illness, began with abdominal cramps four weeks before she visited me at my office. There was no bowel or urinary disturbance. The use of laxatives caused free bowel movements and the passage of gas gave relief from pain for a time. There was no collapse and no feeling of weakness. The pain was low down and not localized to either side. The following menstrual period was uncertain owing to the onset of vaginal bleeding of irregular character. Her general physical condition felt different to her than ordinary menstruation. Pain, intermittent bleeding and disturbed menstruation, with other systems normal, led to diagnosis of ectopic gestation.

Operation, Abdomen opened. Peritoneal cavity appeared normal. Pelvic organs seemed normal in position and appearance except uterus which was uniformly enlarged but normal in colour. The tubes were normal, as well as ovaries. Continuation of pregnancy was much desired by patient if possible so examination was restricted. A small dimple was noted on posterior surface at junction of tube and uterus. Peritoneum was normal. Gentle pressure with finger showed loss of underlying tissues. An incision was made and an interstitial pregnancy in an intact gestation sac removed. The uterus was out of proportion to this sac. The wound of the uterus was enlarged and another gestation sac in normal position in the uterus was removed. The uterus was closed. Three subsequent pregnancies and labors have been quite normal.

Diagnosis. Interstitial pregnancy with a twin in normal position in the uterus.

D. A. MCLEOD, M.D.

Encephalitis Symptomatic of Brain Abscess.

This patient was a little boy who at the time his illness began was four and a half years old. Until that date he had always been well and very active for his age.

In May, 1931 he contracted a mild cold, which was complicated by a discharge from the right ear. Both the cold and the ear discharge cleared up in less than three weeks. Sometime in June, perhaps about the middle, he began to suffer from frontal headache, which became severe, constant and centered over the right eye. It was this condition which caused me to give the case more serious thought.

July 6th. Admitted to St. Joseph's Hospital and described as follows:—Severe frontal headache, irritability aggravated by any examination of the face, head or neck, no rigidity of the neck muscles, and little if any tenderness along the spine, fluid obtained from lumbar puncture clear but under considerable pressure.

Report on Spinal Fluid.

Cell count	13
Albumen	negative.
Sugar	trace
Globulin	trace
Lymphocytes	several small
Polymorphs	none
Stain for T. B. and other organisms	negative
Kahn's reaction	negative

July 27th. Condition again noted—Severe frontal headache, vomiting, irritability, Kernig's sign absent, patellar and plantar reflex normal, and fundus of each eye showing marked oedema, with an indefinite border for the right disc.

August 26th. Discharged from Hospital with the following notation—Constant headache, vomiting, irritable when disturbed, spastic weakness of the left arm and leg but able to walk, oedema of both fundi.

Other observation made in Hospital.

Temperature—Usually subnormal with an irregular tracing from 96.5° to 98°. Only on a few occasions was it recorded above normal and then for a short time only. The highest point reached was 100.4°.

Pulse—The rate varied from 50 to 100 usually between 70 and 100.

Respirations—Regular at 20.

No incontinence of the bladder or rectum. Spastic weakness came on first in the left arm followed by the left leg. The face was drawn somewhat to the right side. He could only walk with difficulty on discharge.

About the middle of October he began to suffer from convulsive seizures of a jacksonian character. The first four occurred on four consecutive days about five o'clock in the afternoon. Each seizure was controlled with 1-32 gr. morp. hypo. Other attacks occurred but not so severe as the first four, all about the same hour, that is, late in the afternoon. There were none after December first.

During the week between Christmas and New Year's the climax was reached. He remained in a partial stupor, the left arm was completely useless but a little spastic, the left leg very weak but spastic, face drawn to the

right side, involuntary function of both bladder and rectum, both fundi very oedematous, the right disc more effected than the left, pupils of unequal size.

In January he was a little better. In February he could walk a little and from then on he gradually improved. At present he can run and play like other boys, goes to school every day and is learning well. He still has a little weakness of the left ankle and a little something about him which is hard to describe "a residue."

Conclusion—During the Christmas week I felt that my previous diagnosis of Brain Abscess was well confirmed, but with his subsequent recovery without operative interference, and the decided opinion of the literature on this disease I feel forced to change my opinion and seek an alternative. The alternative which I offer is Encephalitis localized with maximum intensity in the right Temporal Lobe.

W. W. PATTON.
Port Morien, N. S.

Late Ectopic Pregnancy with Intraligamentary Insertion of Placenta.

Mrs. S. Age 25.

Patient was admitted to the New Waterford General Hospital on March 19th. 1931, in deep shock. She presented a true picture of internal haemorrhage. Under treatment her condition returned to normal in a few hours.

There was nothing in her personal or family history relevant to the present condition, menstruation has always been regular and normal. Last period ended on Dec. 8, 1930. During the month of January she suffered from vague pains in both lower abdominal quadrants without nausea or vomiting, and relieved by laxatives. On March 10th, she had a slight uterine haemorrhage, lasting about a day, accompanied by the passage of a "fleshy" mass, which on examination proved to be a decidual cast. She had no great inconvenience following this until the date of admission.

On physical examination the heart and lungs are normal. The abdomen moves freely on respiration. The lower left quadrant is slightly distended. There is no tenderness or muscular rigidity on palpation. A freely movable mass is easily detected in the lower left quadrant. The upper border lies about the level of a point midway between the umbilicus and symphysis and the inner border reaches the midline.

Vaginal examination shows the external os slightly dilated, softening of the lower uterine segment, some enlargement of the uterus, with the fundus displaced to the right. The left fornix was fuller than the right and fluctuation could be detected.

Urinalysis, Sp. G. 1018. Albumin nil. Sugar, a trace. Occasional pus cell and granular cast in the sediment.

Blood picture, Leucocytes 13600, erythrocytes 5,265000, haemoglobin 65%, polymorphs. 70.5%, large mononulcears 5%, small mononuclears 23.5%, eosinophiles 1%, blood pressure 110|72.

Diagnosis:—Ectopic Pregnancy.

Patient was kept under close observation for six weeks. During this time she went into slight shock on two occasions but not sĕvere enough to necessitate treatment. Except for this, the patient's condition improved steadily.

OPERATION

The abdomen was opened through a midline incision. The peritoneum was slightly thickened over the mass, a haemorrhagic cyst, but not adherent

except for a short distance along its outer border. The small bowel was displaced upward and to the right. Approximately 1000 cc. of blood was aspirated from the cyst, which permitted a freer access to its attachments. The lower pole was implanted between the layers of the broad ligament. Foetal parts were easily palpable , but no heart beat or cord pulsation was detected. The placenta and membranous bag was removed intact. The foetus was in the fourth month of gestation. The balance of the cyst wall along with the left tube and ovary was removed, by ligating the pedicle with heavy silk. One cigarette drain was placed in the pouch of Douglass and another at the placental site. 500 c. c. of normal saline was placed in the abdominal cavity.

Convalescence was uneventful and patient has been in excellent health since the operation. There have been no subsequent pregnancies.

The question of operation in this case was a difficult one. Authorities are not unanimous on this point. Some advise operation as soon as diagnosis is established, while many prefer to delay it to the fourth or fifth month of gestation, or even term. The many complications which might result from delay were the deciding factor in this instance.

I am indebted to my New Waterford Colleagues for their assistance and timely advice in bringing this case to a successful termination.

F. T. MacLeod, M. D.
New Waterford, N. S.

Acute Pancreatitis.

Mrs. S. Age 28 years. Housewife.

Personal History: Had always been in good health up to the birth of her first child six years ago. Since that time her complaints have been many and varied but she has always appeared to be in the best of health. Following the birth of her last child she had a moderately prolapsed uterus resulting from poorly healed perineal lacerations. Eighteen months previous to her present illness she had a perineorrhaphy, ventral suspension and appendectomy performed. Since that time she has enjoyed good health.

Family history: Negative.

Menstrual history: Normal. Periods of 4|28 day type.

On October 14|33 about 8 p. m. she became violently ill with severe abdominal pain and vomiting. When seen by a doctor she was walking the floor, but almost in a state of collapse. So severe was the pain that it was only with great difficulty that the patient was examined and morphine sulph. gr. $\frac{1}{4}$ immediately given. At this time there was extreme tenderness over the epigastrium, but other systems were negative. Temp. normal, pulse-84|min. A few hours later the patient was re-examined. At this time her temperature was 102.5 and her pulse 120|min. At this time also there was no rigidity, no distension but extreme tenderness in epigastric region. Vomiting still persisted—a thin, watery, colorless fluid being expelled in very small quantities. Patient was then sent into hospital. A blood picture showed leucocytosis of 26,000. Urine showed Albumin ++, but was negative for any other pathology. On being examined again (8 hours following first examination) her abdomen was found to be slightly distended, fairly rigid, but not the board-like rigidity found in a perforated ulcer. She was very tender over epigastric area, the lower abdomen not being particularly tender. Temperature now was 105.5, pulse 140|min. Pain was very severe, patient groaning

continuously. Palpation of abdomen at this time was negative for pathology. No masses felt. No fluid detected. The condition now pointed to a ruptured viscera. However, the rapid rise in the leucocyte count, absence of board-like rigidity and no previous history of indigestion was against perforated ulcer. Acute appendicitis was ruled out for obvious reasons as was also ruptured tubal pregnancy. With a provisional but doubtful diagnosis of ruptured viscera the patient was at once prepared for operation.

The abdomen was opened by incision, one inch to right of midline, extending from costal margin to umbilicus. On opening the peritoneum a blood stained watery fluid escaped. The gall-bladder was enormously distended almost to the point of rupture and the mesentery was lightly adherent to liver and stomach. These adhesions were separated and stomach and duodenum exposed and found to be normal. No evidence of gall-stones. A large quantity of blood stained fluid was constantly welling up from the visceral coils. An elongated mass about the size of an orange was found on palpation, posterior to the stomach, which proved to be an enormously enlarged head of pancreas, consequently acute pancreatitis was evident. No attempt was made to incise the tumor as is sometimes recommended, nor was the gall-bladder drained. Three drains were inserted. One large rubber drain in contact with the head, one behind the liver and one in the lower abdominal cavity. The wound was then closed in layers.

Following the operation the patient had an extremely stormy time. Her temperature varied from 101.5 to 105.5. Pulse 130-140 per minute. On the fourth day she began to improve. Temperature gradually dropped and pulse slowed down. Drains were removed on the eighth day and she was discharged on the seventeeth day. Since that time she has enjoyed good health.

Diagnosis: Acute Haemorrhagic Pancreatitis.

A. CALDER, M.D.
Glace Bay.

DR. JOHN STEWART.

Halifax, Dec. 26, 1933.

To set a standard where the plane is high,
Which life's recruits may proudly emulate;
To take those graces that in phrases die,
And in heart-throbs make them articulate;
To lay one's service where a country's need
Erects her altar, and her incense rises;
To give the poor the best, nor deem the meed
Of speechless gratitude the worst of prizes;
To show how real worth may wear the cloak,
Of Modesty, and it not look amiss;
To be enshrined in hearts of humble folk,
And those of learned guilds—ah, surely this
Is an attainment realized by few,
But manifest, but eminent in you.

ALEXANDER LOUIS FRASER
Bathurst, N. B.

Toronto Globe, Jan., 1934.

LABORATORY

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

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

Blood Group determination for Transfusion:—

Blood transfusion has become so common a practice that some reference should be made to the method of choosing a suitable donor. It is essential that the corpuscles of the donor should neither be haemolysed nor agglutinated by the serum of the patient, nor the corpuscles of the patient by the serum of the donor. In point of practice it has been found that if the cells are not agglutinated, they will not be haemolysed, so that it is only necessary to test for agglutination.

1. By matching the cells of the donor against the serum of the patient and the cells of the patient against the serum of the donor, observing whether agglutination occurs.

2. By grouping the blood of the donor and of the patient, and determining whether the groups will harmonize.

Matching: Where transfusions are only done at long intervals, and no special serum is available, the blood of the patient may be matched directly against that of the patient. Corpuscles and serum are collected from patient and donor. The corpuscles are obtained by collecting 2 drops of blood in 1cc. of 2 per cent. sodium citrate in normal saline, the serum by withdrawing the blood from the vein and allowing it to clot.

One drop of serum is mixed with the cell emulsion on a cover glass and the mixture examined as a hanging drop. Agglutination will occur in 15 minutes if the bloods are incompatible.

Grouping: The blood of all human beings may be divided into four groups depending on the presence of iso-haemagglutinins. Some of these groups will not agglutinate, others will. The approximate percentage of the different groups is as follows:—

Group 1-7 per cent., Group II-40 per cent, Group III-7 per cent. Group IV-46 per cent. But variations may occur in various districts.

The members of Group IV may theoretrically be used as universal donors, for their cells are not agglutinated by the sera of any other group. Members of Group I can receive blood from any other group, for their serum does not agglutinate the cells of any other group. The remaining reactions are seen in the accompanying table:—

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

Corpuscles (donor)		Sera (Patient)				
Moss	(Landsteiner)	I	II	III	IV	
I	(AB)	O	+	+	+	+=agglutination. O=no agglutination.
II	(A)	O	O	+	+	
III	(B)	O	+	O	+	
IV	(O)	O	O	O	O	

It will thus be seen that if we have known sera of Group II (A) and Group III (B) we can determine to what groups any donor or patient belongs. A drop of the serum is mixed with a drop of the cell suspension and agglutination looked for as before.

If no agglutination of the cells occurs with either II or III serum the subject belongs to Group IV; if both agglutinate he belongs to Group I; if agglutination occurs with III serum and not with II he belongs to Group II and vice-versa to Group III.

The great advantage of this method is that a list of donors belonging to known groups can be kept, and only the blood of the patient requires to be grouped. Donors should be healthy young men preferably of tall wiry build with large veins. There should be no history of recent illness. Physical examination, Wassermann or Kahn test and temperature should be normal. Such a donor can give 4 or 5 transfusions of 400cc. each at intervals of 3 to 5 days without ill effects. Women who give transfusions develop anaemia more readily than do men.

In every case the donor and patient should be matched together as well as grouped. This will serve to lessen the undesirable reactions which occasionally occur after blood transfusion in spite of every precaution.

These reactions may be divided as follows:—

1. febrile reactions, 2. wrong-group reactions, 3. anaphylactoid reactions. The second and third commence shortly after the beginning of a transfusion, the former being followed by haemoglobinuria, the latter by urticaria.

The febrile reaction, with or without chills, is the most frequent complication. It comes on from ½ hour to several hours after and may be due to a number of factors. Some of the cases may be due to the presence of sub-groups In others there may be an incompatibility. on the part of the leucocytes, i.e. the white cells of different persons may be incompatible. The use of non-fasting donors may explain a third group of cases. The latter two are probably due to a foreign protein reaction. If the same donor is to be used after an interval of time for a second transfusion, even although the two bloods belong to suitable groups, they should be matched again, otherwise alarming haemolysis and haemoglobinuria may occur, owing to the development in the patient's blood of agglutinins and haemolysins originally absent. Unless this precaution is taken a fatality may result.

It may not be safe for a patient in Group I (a universal recipient) who has previously received an injection of blood from a member of Group II, to receive another from Group III, for the patient is no longer a pure Group I, but a combined I and II.

A Universal donor (Group IV) is not so satisfactory as when donor and patient are in the same group. If a universal donor is used the patient may have a chill and fever following transfusion.

Autoagglutination may be present in haemolytic icterus, pneumonia, anaemias, cachexia or syphilis. Panagglutination may occur in bacteremias and chronic suppurations. This state may prevent a correct determination of the patient's blood group. Transfusion fatalities are more frequent in diseases of the blood, especially the leukaemias, and in sepsis than in acute haemorrhage. The donated blood should never be more than one-fifth the volume of the patient's blood.

After all precautions are taken there is a certain risk that is unavoidable, and this accounts for a fatality in every one or two thousand transfusions. The commonest cause of death is suppression of urine from haemolysis and haemoglobin infarction of the kidney which is accompanied by an acidosis.

The above grouping is that described by Moss in 1910. Jansky in 1907 arrived at similar conclusions, but unfortunately the members of the groups in the two classifications were transposed. Landsteiner suggested that the blood groups be designated by capital letters indicating the agglutinogen of the red cells, thus in the Moss system Group I becomes AB; Group II A; Group III B; Group IV O; This eliminates all confusion. It has been approved by the League of Nations but the Moss system is so well established that it is as well to continue both.

OBITUARY

DR. ALEXANDER A. MacDONALD, for nearly forty years a practising physician in Dorchester, Mass., died at St. Martha's Hospital, Antigonish, on January 7th. Dr. MacDonald was born in Antigonish and was educated at St. Francis Xavier College. He was unmarried.

The death occurred on January 12th in Jersey City of Dr. John J. McLean, prominent Metropolitan physician, formerly of Pictou County. Dr. McLean graduated from Dalhousie University in 1880; he afterwards took post-graduate work at the College of Physicians and Surgeons of Columbia University and began his practice in Jersey City in 1889.

At Campbellton early in December there occurred the death of one of Pictou's worthy professional sons, Dr. Daniel Murray. Dr. Murray was born in Plainfield seventy-six years ago. After teaching a number of terms in the vicinity of Scotsburn he entered Pictou Academy. From there he went to study at Dalhousie University and later graduated from McGill with a degree of M.D.,C.M. Shortly after graduation he located in Campbellton, where he practised for forty-six years.

Another of Nova Scotia's physicians passed away in Pasadena, California, in the person of Dr. John F. Barbrick. Dr. Barbrick received his early education at Shubenacadie and went to Boston at an early age. He graduated from the Boston Medical College in 1890 and afterwards studied at the Medical College at Atlanta, Georgia, and also the New York Polyclinic. The Doctor practised for a number of years in Boston. He retired from active work and took up residence in California in 1923.

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

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Divisional Medical Health Officer - -	DR. C. M. BAYNE, Sydney.
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Cameron, J. J., Antigonish (County).
MacKinnon, W. F., Antigonish.

CAPE BRETON COUNTY

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Miller, B. F., New Waterford.
MacKeough, W. T., Sydney Mines.
Archibald, B. C., Glace Bay.
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O'Neil, F., Sydney (Louisburg & C. B. Co.)
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Johnson, T. R., Great Village (County).

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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

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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).

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

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

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

Communicable Diseases Reported by the Medical Health Officers for the month of January, 1934.

County	Cer-Spi. Meningtis	Chicken Pox	Diphtheria	Influenza	German Measles	Measles	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	Tbc. other forms	V. D. G.	V. D. S.	Whooping Cough	Goitre	Erysipelas	TOTAL
Annapolis	..	..	..	3	..	..	..	..	..	..	..	..	..	..	..	..	..	3
Antigonish	..	..	..	..	25	..	..	..	..	..	..	..	..	..	..	..	..	25
Cape Breton	..	..	1	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2
Colchester	..	8	..	20	..	..	..	5	3	..	..	..	1	..	32	..	..	69
Cumberland	..	..	..	10	..	..	..	..	7	..	..	..	2	2	10	..	..	31
Digby	..	..	..	..	..	..	..	1	1	..	..	..	2	..	..	1	..	5
Guysboro	..	..	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	1
Halifax City	..	8	9	..	..	..	..	..	17	..	1	..	..	..	4	..	1	40
Halifax	..	..	..	..	..	..	..	..	6	..	..	..	..	..	..	..	..	6
Hants	..	..	..	..	..	..	..	..	..	..	..	..	..	..	5	..	..	5
Inverness	..	1	..	2	..	..	..	2	..	..	..	..	3	..	..	1	..	9
Kings	1	..	..	15	..	..	..	2	7	..	1	..	3	..	..	..	..	29
Lunenburg	..	..	..	..	..	..	..	..	..	..	..	..	..	..	25	..	..	25
Pictou	..	1	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	2
Queens	..	..	..	..	..	..	..	..	1	..	1	..	..	..	..	..	..	2
Richmond	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Shelburne	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Victoria	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	...
Yarmouth	..	..	3	..	..	..	..	..	..	..	2	..	..	..	..	..	..	5
TOTAL	1	18	13	50	25	..	..	10	44	..	5	1	11	2	76	2	1	259

RETURNS VITAL STATISTICS FOR DECEMBER, 1933.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis	10	14	6	9	11	0
Antigonish	8	9	3	7	10	2
Cape Breton	113	107	45	48	51	7
Colchester	18	22	25	12	24	3
Cumberland	28	33	20	14	12	3
Digby	27	18	10	14	6	1
Guysboro	6	8	6	9	5	2
Halifax	106	100	53	75	47	8
Hants	20	18	8	10	9	3
Inverness	20	18	15	11	8	0
Kings	30	30	27	14	9	0
Lunenburg	6	5	20	4	10	1
Pictou	14	13	27	15	17	2
Queens	7	3	7	2	2	0
Richmond	4	8	4	5	4	0
Shelburne	2	9	9	4	2	0
Victoria	8	9	1	5	2	1
Yarmouth	3	3	9	5	1	1
TOTAL	430	427	295	263	230	34

Report on Tissues sent for examination to the Pathological Laboratory, from January 1st, 1931 to February 1st, 1931.

The number of tissues sectioned is 156. In addition to this, 54 tissues from 12 autopsies were sectioned, making 210 tissues in all.

Tumours, simple	11
Tumours, malignant	26
Tumours, suspicious	2
Other conditions	117
Tumours, pre-cancerous	..
Tissues from 12 autopsies	54—210

The People of Canada Enjoyed Better Health and had a Lower Death Rate During the Year 1932 and in 1933 than Ever Before.

When you read, says a bulletin issued by the Metropolitan Insurance Co., that during many recent months, in spite of the financial depression, the Canadian people enjoyed better health and had a lower death rate than ever before, you may wonder why. One outstanding reason is that our people were well prepared, physically, to resist sickness.

In past decades, millions of dollars were invested to prevent as well as to cure disease. They returned rich health dividends. The movement for healthier living conditions in all parts of the country had gained such momentum that temporary obstacles and difficulties failed to check it.

You know that the death rate from tuberculosis has declined steadily. You know that smallpox, typhoid and diphtheria can be prevented. You hope to see the day when whooping cough, measles and scarlet fever will disappear, as yellow fever and cholera did—thanks to scientific preventive methods. Scientists are faithfully working day and night for these victories.

The lower death rate is due in no small measure to the present efficiency of hospital and nursing services that have required years in which to develop. In assuring pure water, safe milk, clean food, swept streets and proper sewerage systems your Health Departments did their part in making health records in 1932 and 1933.

Some of the forces upon which the health of people depends are financed by Dominion, Provincial and local appropriations. But many of the forces which have contributed so greatly to general welfare—the Red Cross, the Tuberculosis Associations, the Victorian Order of Nurses, the Canadian Committee for Mental Hygiene, the Canadian Social Hygiene Council, and others—are largely dependent upon private contributions.

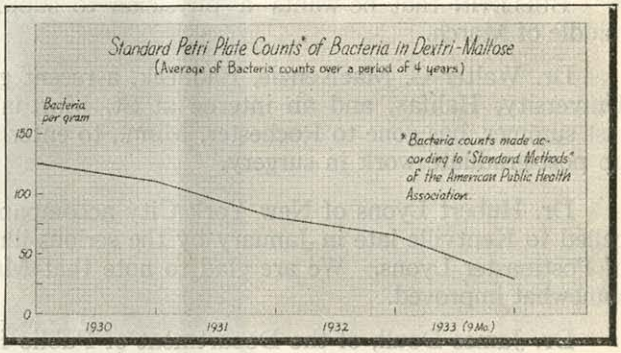
To-day the forward health movement has been slowed down in some localities because of reduced appropriations and smaller contributions. In certain other communities some of the official health work has stopped.

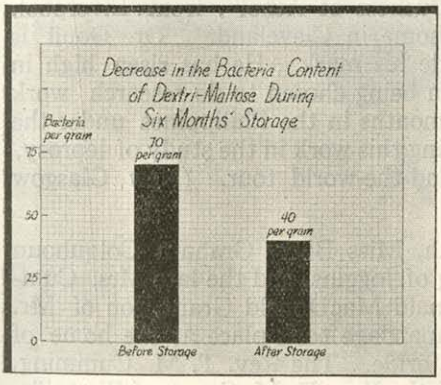
While the people of our country are working shoulder to shoulder, collectively and individually, to restore material prosperity, no greater tragedy could befall them than to sacrifice their greatest wealth—their health. If you would have increasing health, and decreasing disease, keep up the power and the momentum of the health movement.

Why we supply Dextri-Maltose in Powder form only . . .

It is mechanically and bacteriologically clean

Prepared in powdered form, Dextri-Maltose is not likely to form a culture medium for micro-organisms. This graph shows that the bacteria count during a 4-year period is well under 125 per gram and only 30 in recent analyses. Contrast this with the count of 10,000 per cc., the maximum allowable count for certified milk.



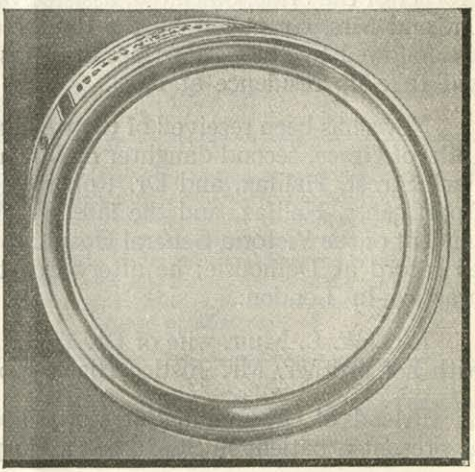


Its bacteria count decreases during storage

A representative sample of Dextri-Maltose, which to start had a low bacteria count of 70 per gram, revealed a count of only 40 per gram after standing for 6 months at room temperature. During this period the container was opened 12 times for biweekly sampling, without any special precautions being taken to prevent contamination. Yet the bacteria count actually decreased.

It will not support bacterial growth even after inoculation

The tin of Dextri-Maltose shown at right was inoculated with the thrush organism, a common dust-borne fungus. At the end of 17 days the Dextri-Maltose was free from visible growth. This is explainable by the fact that bacteria, yeasts, and fungi require moisture for reproduction—and the moisture content of Dextri-Maltose is extremely low, only 5 per cent. It is safe to say that no baby can be infected with thrush or other organisms from Dextri-Maltose, *per se*.



DEXTRI-MALTOSE
clean — not cleaned

Please enclose professional card when requesting samples to cooperate in preventing their reaching unauthorized persons.
Mead Johnson & Co. of Canada, Ltd., Belleville, Ont.

Personal Interest Notes

DR. D. J. HARTIGAN, of New Waterford, Cape Breton, has notified the BULLETIN that he wants a physician to supply for him beginning the middle of March.

Dr. Walter C. MacKenzie, Baddeck, a recent graduate from Dalhousie University, Halifax, and an interne at St. Martha's Hospital, Antigonish, last summer, has gone to Rochester, Minn., to enter the Mayo Clinic to take up post-graduate work in surgery.

Dr. Hubert Lyons of New York City accompanied by Mrs. Lyons, was called to Kentville late in January by the serious illness of Mrs. Lyons, wife of Postmaster Lyons. We are glad to note that Mrs. Lyons' condition has somewhat improved.

Dr. James Doull, of the Department of Public Health in the University of Cleveland, Ohio, Mrs. Doull their two children and maid, arrived in Halifax December 31st on the S. S. "Duchess of Athol", from Liverpool, and left New Years morning for their home in Cleveland. Dr. Doull is another New Glasgow boy who has made his mark. He has risen high in his profession and was signally honored in being chosen to do research work in which he has been engaged for seven months in the Philippines under the Leonard Wood Memorial. After completing this work in the study of leprosy, the Doctor and his family made a round-the-world tour. (New Glasgow *Evening News*).

At Westville, N. S. on January 18th, Miss Betty Graham Colquhoun Cumming, daughter of John D. Cumming of Joggins, and the late Mrs. Cumming, was united in marriage to Dr. Donald MacDonald Grant, son of Mr. and Mrs. D. M. Grant of Eureka. The marriage took place at the home of Mr. and Mrs. Charles Swan, sister of the bride. The Rev. T. M. Cumming, brother of the bride, officiated, assisted by the Rev. D. M. Grant of Westville. Dr. and Mrs. Grant left by the three o'clock train for the wedding trip and are followed by the best wishes of a host of friends. At its conclusion they will take up residence at Noel.

News has been received of the wedding in London, England, on December 13th, of Grace, second daughter of Mr. and Mrs. R. L. MacLatchy, 10 South Park Street, Halifax, and Dr. Robert Kenney, son of Mrs. Kenney, Coburg Apartments, Halifax, and the late W. W. Kenney, for many years Superintendent of the Victoria General Hospital. Dr. Kenney had a most distinguished record at Dalhousie; he afterwards took the F.R.C.S. and established a practice in London.

Mrs. W. L. Muir, wife of Dr. W. L. Muir of Halifax, is visiting Barbados with her brother, Mr. Justice Bigelow of Regina.

Friends of Dr. Fabian Bates of Glace Bay will regret to learn that he is at present a patient in St. Joseph's Hospital.

Dr. N. H. Gosse returned early this month from a short visit to Boston and New York.

Having finished his work with the Nova Scotia Tuberculosis Commission, Dr. Joseph Hayes has opened an office at his residence, 82 Oxford Street, Halifax, for the practice of his profession.

Dr. Hayes has recently returned from Toronto, where he has been doing special work on Physio-Therapy with particular reference to Electricity. He had entree to the Physio-Therapy Department of Christie Street Hospital, and the Physio-Therapy clinics of the Ontario Workmen's Compensation Board. The Doctor has had installed in his office a modern Electro-Therapy equipment.

Cape Breton Doctors discard Horse for Plane. On January 21st Dr. C. L. MacMillan of Baddeck, received an urgent call to go to Ingonish, where his services were much needed. The doctor got in touch with Pilot Lindsay Rood of the Cape Breton Flying Club, and in a few minutes Air Pilot Rood was headed north through the below zero winds. At Baddeck he made a perfect landing and soon had Dr. MacMillan on board and then flew to Ingonish where another perfect landing was made and Dr. MacMillan was rushed by horse and sleigh to the waiting patient.

There being no storage place where he could leave the plane, Pilot Rood flew back to Glace Bay, returning for Dr. MacMillan the next day.

Pilot Rood again came to the help of the medical profession by flying County Health Officer Dr. Freeman O'Neil from Sydney to Forchu to attend a critical case there. The return to Sydney was made in the evening and as a result, it was necessary here to make a landing on the Harbour in darkness. After depositing Dr. Freeman O'Neil the plane proceeded to Grand Lake Airport where Pilot Rood landed with the aid of flares.

Changes in Staff at the Nova Scotia Hospital. It was announced on January 9th that Dr. F. E. Lawlor, who had been on leave of absence until March, would resume the post of Medical Superintendent of the Nova Scotia Hospital. Dr. Murray MacKay, who had served as Acting Medical Assistant, has been appointed assistant to Dr. Lawlor.

Dr. Fred MacLellan who has spent the past few months in study at hospitals in New York and Montreal, has recently been home on a visit with his parents, Mr. and Mrs. E. C. MacLellan, Tatamagouche.

Dr. Harry Barnaby of New York, is visiting his home in Bridgewater.

Dr. J. A. Sponagle has been elected Mayor of Middleton.

Dr. Alan R. Morton of Halifax has opened an office for the general practice of medicine at No. 2 Brenton Place, corner of Brenton Street, Halifax, N. S. Dr. Morton is a graduate of Dalhousie University, having received his medical degree in 1925. Following graduation he took post-graduate work at Sloan Hospital, New York. He was in general practice in Wolfville before accepting the position of assistant superintendent of the Nova Scotia Hospital. He held this position for the past six and a half years, during which time he visited a number of mental hospitals in the large medical centres, Boston, New York, Philadelphia, Baltimore and Washington.

Dr. and Mrs. Arthur Lister Murphy (nee Shore) of Halifax are receiving congratulations on the birth to them of a daughter.

Dr. J. S. Brean has been elected Mayor of Mulgrave.

QUACK DOCTORS FACE TRIAL IN UNITED STATES.

Illegal Practitioners of Medicine are Reported Very Active.

By JOHN V. SCOTZIN

(International News Service Staff Correspondent).

HARRISBURG,—Determined to drive out all illegal practitioners of medicine from its confines, the commonwealth of Pennsylvania has decreed a "finish-fight" on pow-wowing—the practice of mystic healing.

Hexerel, the Black Magic of the Middle Ages, is ingrained in the orthodox Pennsylvanian German quite generally as an inherent religious belief. It had its inception in Pennsylvania over 200 years ago.

The practice supposedly cures all ills mysteriously and is employed to put a curse on one's enemies according to its adherents. Weird charms, papers bearing cabalistic marks and pungent teas are used in the healing process.

The commonwealth, however, defines pow-wowing as a violation of a state law which forbids the practice of medicine without a licence. Even though followers of the healing arts may deal out their "cures" without thought of pecuniary gains, they are violating the act, a section of which declares that any one, who holds himself as a doctor without a license, is a violator.

Relentless Drive.

Robert W. Semenow, Law Enforcement director of the State Bureau of Medical Licensure, is heading the relentless drive to eradicate illegal practitioners.

"The Illegal practitioner of medicine and hex doctors are served with notice that the State means business in enforcement of this law and we are going to prosecute them," he declared.

"This is the beginning of a fight to the finish," he said, "and we mean to get rid of every last one of these pow-wow people before we are finished." Unlicensed chiropractors, quack doctors and others also will be prosecuted Semenow asserted.

Semenow branded the practice a "racket" which has been enormously profitable. He said he is at a loss to understand the gullibility of the victimized patients in accepting the cures.

Virtually defying the state to stamp out the weird beliefs, a noted authority on hexerel and kindred subjects has risen to the defense of the hex doctors who he said "are being maligned in the press and before the courts of the commonwealth because of their religious upbringing."

Part of Religion.

A. Monroe Aurand, Jr., author of "The Pow-Wow Book", pointed out that the practice is a part of the Pennsylvania German's religion.

"It is in their life," he declared. "The Germans settled here a couple of hundred years ago and had no doctors. They based their healing arts on Holy Writ, and all the laws and courts in the land cannot separate these people from their inherent beliefs."

He charged that the healing arts were manifest "before there was a commonwealth of Pennsylvania," adding that "these ideals cannot be taken away from these people so long as constitutional privileges exist."

The state's campaign was formally launched with the arrest of John S. Geigh, 70, and Charles Klinger, 50, in Lancaster County, the "hot-bed" of pow-wowing. The alleged hex doctors were released under bail.—*Sydney Post Record.* Nov. 25.

The Family Doctor.

In an address to the undergraduate medical society at the University of Toronto, Hon. Dr. R. A. Bruce has extolled the place of the general practitioner, as compared with the specialist in humanitarian service. The Lieutenant-Governor argued that excessive specialization has a narrowing tendency on the mind and that the general practitioner or family physician obtains a richer and broader understanding of life. Those of us who came up to the city from farms or small towns or villages can recall with pleasure the faithful local doctor who labored day and night in the interests of his patients. No effort was too great for him if he could only save life or ease pain. He became the friend, adviser and confidante of those committed to his ministratons. A tribute to one of these old-fashioned physicians, Dr. W.J. Gunne, of Kenora, Ontario, recently appeared in the Kenora Miner and News. It reads:

Our Beloved Physician.

When he lays aside his scalpel
And his work on earth is done;
When he's through with pills and powders
And his mortal race is run:

When he's passed through purgatory
And he nears the golden gate
Where, outside the shining portal,
Many souls expectant wait.

Eager to effect an entrance
To the city of the saints
Where throughout eternal ages
They'll be free from earths complaints;

Old St. Peter'll see him coming
Out beyond the milling crowd
That is blocking up the pathway,
Using elbows, shouting loud,

So's to make the old Saint hear them
Make him open wide the gate
For their entrance through the portal—
They're too eager, see, to wait;

Each would lead the whole procession;
Little thinks of other's rights;
Yearns to sit in favored places
So's to take in all the sights.

This won't cause our doctor worry
He has done his level best
To relieve his fellow mortals—
To his God he leaves the rest.

Then, methinks, I hear St. Peter
Lift his voice in accents clear
To the surging crowd about him
So each one can plainly hear.

"Quit your pushin' and a-shovin'
Cease your most unseemly din;
Stand aside, there; make a pssage
And let Doctor Gunne come in."

—ONE OF MANY

Doctors Offer Aid in Only Extreme Cases.

Seeking to bring to a climax the dispute over payment of costs of medical services, the Winnipeg Medical Council to-day declined to render medical assistance to persons receiving unemployment aid except in cases where death threatens.—*New Glasgow Evening News*, Jan. 27.

Child Health and the Depression.

What is the depression doing to the health of young school children? Where relief is well organized, perhaps not so much harm as might be expected or at least such would seem to be the evidence coming from three widely scattered centres in Canada—Vancouver, Toronto and Prince Edward Island.

An interesting report from Vancouver indicates that in 1929, 11% of the school children under health inspection were showing evidence of malnutrition but with a gradual decrease in number until in 1931 only 8% and in 1933 (from January to October) only 5.3% were more than 10% under weight. The report goes on to say that in spite of the tremendous amount of unemployment and the large number of families on relief, in many cases the children are getting more milk and more wholesome food and more sleep than when families had more money to spend.

From Toronto comes the news that a survey was made in 1932 of the incidence of malnutrition and anaemic appearance among the children in eight elementary Public Schools, selected in such a way as to include children of all classes and economic status. Among 7,857 children 369 or 4.69% were found to be suffering from malnourishment or a similar condition. Of this total the diet of 146, that is nearly 40%, was adequate but wrongly chosen. Among 25% of the pupils of the combined public and separate schools examined in Toronto yearly, in 1927, 4.2% showed signs of malnutrition, in 1929, 4.4% and in 1931, 5.3%. Free milk has been provided by the Canadian Progress Club to 609 children of twelve schools in poorer districts, supplemented by contributions from teachers and dairies.

In Prince Edward Island 20% of the children who are 10% under weight for height and age, are suffering from malnutrition. About 30% of the schools are being provided with hot lunches, for those children who live too far away to go home at noon. Increased attendance at school would indicate that at least the children of our island province are not suffering from the exploitation of child labour during the depression.

A healthy babyhood and early childhood are the best foundation on which to build health for school children. To this end the Canadian Council on Child and Family Welfare has compiled a series of twelve monthly letters dealing with the health of the baby during its first year of life, and a further series "Now We're Growing Up" will be sent every three or four months till the child is six years of age. These may be had free on request by writing to Council House, Ottawa, or to the provincial health department of any province.—*Windsor Tribune.*

A colored boy was strolling through a cemetery reading the inscriptions on the tombstones. He came to one which read, "Not dead, but sleeping."

Scratching his head, the negro remarked:

"He sho ain't foolin' anybody but hisself."