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A Plea For Rational Therapeutics

N. B. DREYER,

Professor of Pharmacology, Dalhousie University.

THE trend for simplification of prescriptions which has been advocated by many Pharmacologists and clinicians seems doomed to failure. The old "gunshot" prescription, in spite of its many ingredients, demanded a knowledge of drug action and compatibility on the part of the physician, and skill on the part of the druggist in making it up. In those days the druggist was rightly looked upon as an able assistant in helping to carry out the treatment. This happy state of affairs is fast disappearing largely because the pharmaceutical manufacturers are intent on selling to the druggist and to the medical profession mixtures made up by them and supposedly superior to anything the druggists can compound or the physician can prescribe. The inference to be drawn is that druggists and physicians are incompetent. Fortunately for Nova Scotia, its druggists are among the best trained on this Continent. When one interviews them to obtain an opinion on this glutting of the market with ready-made mixtures they deplore the fact that so few prescriptions are sent them by physicians but that the main call is for proprietary preparations estimated at 75% of the medicines dispensed.

The cost of such proprietaries is out of all proportion to identical mixtures the druggist can compound. On a conservative estimate one can say that the cost to the patient is at least 50% higher than it should be. The detail man sent out by manufacturing houses tell only one side of the story. They extol the merits but say nothing of the demerits of the goods they try to sell. The same is sometimes true of the "literature" of the manufacturer. Nor should one take as gospel the advertising pages of the medical press in every case. The only trustworthy guides are the standard works on materia medica and therapeutics.

There are several undesirable features to the use of ready-made mixtures. These are increased cost; more often than not a complete lack of knowledge on the part of the physician as to their content. It is no exaggeration to say that the doctor is urged to diagnose and the pharmaceutical house will supply the treatment. Does the medical man realize that he is prostituting not only his profession but his intelligence? Further, self-medication which is a dangerous practice becomes possible, and incidentally leads to a loss in fees to the physician for his patients recommend to their friends the remedies and assure them that they are not patent medicines because they were ordered by a physician. Why standard mixtures used for countless years in treating illness should suddenly acquire added virtues merely because the vehicle is pleasant and one or two quite harmless substances with impressive names have been added seems difficult to understand. Yet this is exactly what is happening all over this continent. This undesirable practice can be stopped very easily if physicians will pay a little attention to the vehicle used in their prescriptions. To take an example—syrup of tolu can be used or glycerine or a simple elixir for flavouring instead of drenching the mixture with water.

Below are quoted a few cases in support of the contention that proprietary names given to well-known mixtures occurring in various pharmacopoeias or formularies are sold at excessive prices.

(1) A mixture containing tartar emetic, potassium citrate, wine of ipecacuanha, compound tincture of camphor, syrup of tolu, is sold to the druggist at \$1.00 per pound. To this he must add his carrying charges. When the patient buys this mixture it costs at least 25% more. The druggist can make up an identical mixture and sell it for 75c. per pound. Incidentally he can improve on it by substituting syrup of squills or a senega preparation for the tartar emetic. There are better expectorant mixtures than the above. Ammonium carbonate could safely be included as an expectorant. For some unknown reason potassium iodide which is one of the best expectorants is gradually being forgotten.

(2) A mixture falling in the class of bitters is sold at \$1.10 per pound. It contains tincture of calumba, tincture of nux vomica, compound tincture of gentian, dilute phosphoric acid, glycerine, and wine. Any druggist can make up an identical preparation, sell it for 50c. per pound and make a handsome profit. The pharmacological actions of these drugs remain identical but directly some queer ingredient without any known action is added, the so-called new mixture takes on an increased importance.

(3) Antiseptics for surgical use offer a good field of exploitation. If the surgeon were to enquire about the carbolic acid co-efficient of such preparations he would save himself a lot of trouble. The conditions governing the determination of the carbolic acid co-efficient of an antiseptic are probably as well defined as one could wish. The Lancet modification of the Rideal-Walker method of such determinations is well-known. A condition always to be insisted upon in using any antiseptic is its efficiency firstly on pure cultures of a standard strain of bacteria and secondly its action on the same stain in the presence of organic matter. For experimental purposes serum or an emulsion of faeces (3%) are usually chosen. It is well-known that organic matter reduces the carbolic acid coefficient of most antiseptics except in the cases of phenol and acriflavine. A mercury preparation such as corrosive sublimate has its antiseptic power reduced by 90% in the presence of organic matter. Other mercury preparations are on the market such as mercurochrome or metaphen for treating skin cuts, small abrasions, and for skin disinfection. Mercurochrome is described as a moderately active antiseptic when applied to the skin, mucous membranes, and wounds; it exerts bacteriostatic and bactericidal action. The 2% aqueous solution acts more slowly than the tincture of iodine U.S.P. but has a more prolonged bacteriostatic effect. Nothing, however, is said of its action in presence of organic matter where it suffers a fate similar to corrosive sublimate.

The aqueous-alcohol-acetone solution called surgical solution of mercurochrome is more rapid in its action than the aqueous solution and may be used for skin sterilization. But why deny the alcohol and acetone the sterilizing effect when it is known that they penetrate much better than mercurochrome into the ducts of the sweat and sebaceous glands. Alcohol in 50-70% solution is very effective in sterilizing the skin. This sterilizing action can be increased if the area is first washed with soap and water and then shaved before the application of the 70% alcohol. For the perineum this is not sufficient but after such treatment it may be swabbed with a mixture containing .5% each of brilliant green and crystal violet applied some hours before the operation.

70% alcohol sterilizes the skin in five minutes and is superior to watery solutions of .2% corrosive sublimate or Dakin's fluid. It is just as effective as 5% tincture of iodine in 70% alcohol and has the advantage of not staining the skin. There is no necessity to use picric acid in skin sterilization. Take another example of disinfection—that of the intestinal canal. The most effective method is to employ a good dose of a saline cathartic or castor oil which remove the bacteria mechanically. No antiseptic can be expected to disinfect the whole intestine because of the presence of organic material. In any event the upper portion of the small intestine and the stomach are usually sterile, yet we find salol widely used for sterilizing the intestine. Salol is a name for a substance known chemically as phenyl-salicylate. On reaching the duodenum it is split into phenol and salicylic acid. Both are good antiseptics but their action is largely confined to the upper intestine where it is not required and very little reaches the ileum or the large intestine because the drug is absorbed in the upper intestine. To make matters worse the alkaline reaction of the intestinal juice diminishes the disinfectant action, and quite often phenol poisoning occurs from its use. Calomel is no better as an intestinal antiseptic because the mercury action is easily off-set by the presence of protein. By the time it reaches the large intestine all the mercury has been converted into the insoluble sulphide which is inert.

Borac acid could safely be discarded as an antiseptic lotion and in its place chloramine-T can be used. For the eye .1%, for the urethra .05-1%, as a mouth wash .2%. It may also be used in place of Dakin's fluid or Eusol in treating wounds. Its advantages over the hypochlorites are as follows: greater stability, convenience of preparation, less irritant. It lacks the solvent action of hypochlorites, it is practically non-toxic. For long continued action on a wound or abrasions dichloramine-T in chlorinated paraffin is very useful.

The substances used for reducing gastric acidity are all simple, well-known and quite cheap. Bismuth subcarbonate, bismuth subgallate, calcium carbonate, magnesium oxide, sodium bicarbonate and kaolin are chiefly used. A mixture widely advertised containing the above ingredients (free samples to the physician at regular intervals) retails under a proprietary name at 14c. per ounce. Any druggist can make a similar preparation, sell it for 3c. per ounce and make money. Another preparation similar to the above retails at 22c. per ounce. Druggists can make it up for 4c. per ounce.

Before leaving the alimentary canal some reference must be made to the indiscriminate use of laxatives. Nowadays according to our popular press advertisements, one may say that constipation is a thief of time. The remedies suggested for keeping bowel movements regular vary from saline cathartics, calomel, cascara and senna, liquid paraffin, agar, and that much abused drug phenol phthalein. The public resort to self-medication because the doctors usually do not worry to determine the cause of the constipation; they make no suggestion about suitable diet nor do they recommend regular visits to the toilet. More often than not they prescribe some laxative, very often a proprietary, so setting in a train of evil circumstances. Constipation is probably one of the most easily corrected irregularities if properly handled. Instead of prescribing laxatives one might suggest regular habits, proper diet, and regular meals. Where there have been no movements for two or three days the harmless procedure of a soap enema may be recommended.

The various headache remedies could be reduced in number with benefit to patient and to physician. There is no necessity to have acetyl-salicylic acid combined with different amounts of coedine with or without acetphenetidine made into tablets and sold under some fancy name. It remains acetyl-salicylic acid and as such is infinitely cheaper than when it is camouflaged by a name or number.

The hypnotics also lend themselves to the exploitations of this kind. Every manufacturing firm strives to have a barbituric acid derivative. Given an appropriate name it will sell itself though one still wonders whether barbitone or phenobarbitone are not all that are necessary as hypnotics of this class. One of the safest, most useful, and most effective hypnotics is paraldehyde. Yet how often is it used in medical practice nowadays? Combined with syrup of orange it is quite palatable. Chloral hydrate could also be used more frequently even in certain cases of circulatory weakness, provided two-thirds of the maximal dose is not exceeded. Bromides, one would have thought, were such respectable chemicals that no one would stoop to sell them under a proprietary name, yet there is on the market a preparation containing sodium bromide, tincture of valerian, fluid extract of cascara, and extract of hyoscyamus, priced at \$1.25 per pound. Druggists could make up a similar mixture and sell it for 75c. per pound at a handsome profit.

The harmful effect of proprietary preparations in treatment are such that in one country a book on therapeutics has been written in which are set out the cost of pharmacopoeial mixtures and the cost of the corresponding proprietaries. In England a similar book has appeared. In conclusion one may add the following statement of a well-known druggist, "Why experiment with high priced relatively unknown and unproven proprietaries when there are 586 proven drugs and preparations in the B.P. and 208 in the Canadian formulary compiled and published respectively under the B. M. A. and the council of the C. M. A."

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Tuberculosis of Childhood

T. M. SIENIEWICZ, M.D.

IN the last ten years at least many advances have been made in our knowledge of tuberculosis of infants, childhood and adolescents. The recognition of the primary focus, the tuberculin test, the roentgenological examination, and experimental work, have been the chief means of increasing this knowledge with the result that our conceptions on this subject have been definitely altered. We believed that tuberculosis in childhood was rare and invariably fatal. We now know that it is a relatively common infection in childhood and that it usually runs a benign course until adolescence. Evidence now shows that the type of disease and the type of infection varies geographically. For instance, in Scotland the primary site of infection is commonly found in the abdomen, and the bovine type of tubercle bacillus is frequently to blame. In this respect there is this one great difference between tuberculosis on the Continent and America as compared with Great Britain. Their prognosis of this disease in childhood also seems to be more grave than that of this country. There is an abundance of evidence to show that our infants tolerate quite well the first-infection type of tuberculosis. We now know that reinfection from exogenous sources is the one great and deciding factor as to the future of these children. Observations as a result of intensive studies show that the first-infection type of tuberculous lesions as noted in the Indian, and the Negro, is identical with that of the white, and that it is utter lack of the knowledge of prevention from infection and reinfection that accounts for the high incidence of positive reactors and of the sickness and mortality rates among these Indians and Negroes.

Definition:—The childhood type of pulmonary tuberculosis is defined as the diffuse or circumscribed lesions in the lungs and associated tracheobronchial lymph nodes that result from a first-infection of the pulmonary tissue with the tubercle bacillus. The adult type of pulmonary tuberculosis is simply a lesion resulting from a subsequent infection. All of our patients under fifteen years of age are called children.

Anatomical changes:—The “primary complex” is considered to be the first evidence of infection. The tubercle bacillus enters the air-passages and gives rise to a minute focus of inflammatory reaction at the site of the first-infection. This constitutes the “primary complex” or the Ghon tubercle. From here the infection travels along the lymph channels through the subsidiary lymph nodes to the root-glands. Healing may now take place by the process of caseation and calcification at the site of the primary focus and the glands, with no evidence of disease.

Lymphatic infection may be followed by a blood infection resulting in miliary tuberculosis or a tuberculous bronchopneumonia. The efferents from the paratracheal glands frequently drain directly into the great veins of the thorax and infection may be generalized from this source. Then again a milder form of disease may occur as a result of a backward spread of infection by lymphatics into the lung parenchyma. This may be referred to as an endogenous reinfection and may be produced by such diseases as measles

and whooping cough. This will be shown in the form of a gross caseation of mediastinal glands, with pleural (with effusion) or parenchymatous disease manifesting itself in the form of a pneumonic area which is sometimes referred to as an epituberculous reaction. The amount of superinfection will now decide as to what further changes will occur.

The adult type of tuberculosis in a child is comparatively rare and it invariably is the result of exogenous reinfection obtained from continued exposure to tubercle bacilli emanating from an "open" case.

With further reference to the primary site of infection it is most interesting to note the findings of a study of a consecutive series of 2500 post mortem cases at the Royal Hospital for Sick Children, Glasgow. The ages were from one day up to thirteen years. Tuberculous lesions were found in 372 (14.9 per cent) cases. The primary sites were found as follows: Thoracic 239, abdominal 123, cervical 8, and not found 7. In five there were double primary sites of infection. In most cases there was only one primary focus found, but as many as four in the one case were seen. Bovine tubercle bacilli were isolated from 6 cases where the primary lesion was in the thorax. Out of 58 cases dying as a result of abdominal tuberculosis human tubercle bacilli were isolated in 11 cases and the bovine in 47.

History and Symptoms:—The history of exposure to adult type of pulmonary tuberculosis is most important and demands a most careful investigation particularly with the tuberculin test and roentgenogram.

Symptoms in childhood tuberculosis are usually lacking. It is surprising how often fairly gross lesions are diagnosed in children who are symptom-free. Underweight and changes in disposition are the important signs to note. One must always check up carefully on other sources of chronic infection, particularly that of the throat. Cough is not very often met with, and as a rule there is no expectoration under the age of six or seven years. Usually the picture, then, is one of good health with no evidence of toxæmia.

Physical signs:—Usually they are negative because the pathological changes are not sufficiently gross enough to produce a dulness or changes in the voice and breath sounds. Rales are rarely heard. However, gross enlargement of the tracheobronchial glands will give interscapular dulness with changes in the voice sounds. These findings are frequently made out. The lesions that have spread into the lung are usually demonstrable on physical examination. The physical signs of the adult type of lesion are the same as those seen in adults.

The Tuberculin Test:—The positive tuberculin skin reaction is now generally accepted as indisputable evidence of tuberculous infection, and is being used with increasing frequency. The method of application is important. Accurate results are obtained only by the intracutaneous method (Mantoux Test). "Old Tuberculin" (O.T.) is generally used. We are now using a tuberculin known as Purified Protein Derivative (P.P.D.). This is used in the form of a first strength and a second strength, one-tenth of a cubic centimetre being the dose in each instance. Our practice consists of injecting the first strength, and if the reading is negative at the end of 48 hours, the second strength being administered. Finally, if this reaction is negative, another injection with the first strength is made in three months' time.

A positive skin test indicates that the tissues have been sensitized, or have become allergic, as the result of primary infection. A negative skin test with a few exceptions indicates the absence of tuberculous infection.

Overwhelming tuberculous disease and recent intercurrent infection such as measles are causes of a negative reaction. It is also most important to note that a certain amount of time is necessary in which allergy is developed. Five to six weeks is probably the average, but it may vary from three to fifteen. It is because of this reason that we repeat, in our negative skin test cases to two strengths, with a third test at the end of three months.

A positive skin test in an infant in the first few months of life has a grave significance, and then it rapidly diminishes with increasing age.

The amount of reaction cannot be properly interpreted in terms of extent or severity of the pathological process. However, it has been noted that serious latent lesions were found usually in those children with intense reactions; also that tuberculous lesions are apt to occur with greater frequency among those children who react to the smaller quantity of tuberculin than among those who do not react or react only to the greater strengths.

The incidence of the tuberculin reaction in children is found to vary a great deal. As a rule the large cities give a higher incidence than suburban districts, which in turn is higher than that of rural districts. Surveys in various cities have shown the following percentages of children from one to fifteen years of age reacting to the Mantoux test—New York City 19.2, Chicago 14.4, Philadelphia 61.0 (about 37% were colored), Detroit 13.6, San Francisco 24.6 and London 40.8. The percentages of children at age fifteen years reacting to the test are—New York City 42.1, Chicago 30.5, Philadelphia 79.9, Detroit 16.7, Minneapolis 69.5, San Francisco 46.6, London 82.2. A very interesting and important observation has been made at the Clinic of the Bellevue Hospital where two similar groups of children, contacts, from infancy to fifteen years of age were tuberculin tested at periods about twenty years apart. The findings show that the percentage of reactors to the cutaneous test, that is the von Pirquet, and which gives a higher percentage of negatives than the Mantoux, between 1912 and 1916 was 64, while the percentage reacting to the intracutaneous test in the period of 1930 to 1932 was 46. This clearly shows the effect of public health measures whereby early diagnosis, thus preventing many adults from becoming open cases, and segregation, thus limiting dissemination, resulted in a fewer number of the children coming in contact with tuberculosis being infected. Although first-infection with tubercle probably confers some immunity against tuberculosis, yet we know that exogenous reinfection is invariably responsible for the development of the adult type of disease, which must be due to long continued exposure to tubercle bacilli emanating from an open case.

X-ray Diagnosis:—By this method we are able to demonstrate the point at which sensitization has taken place and also the size and its clinical importance. Our routine calls for x-ray examination of those that react to tuberculin. Stereoscopic films are taken when possible otherwise single films are taken. The classification of the various types of lesion occurring in childhood has been well worked out and it is adopted as follows:—

- A. Proved infection with no demonstrable lesion.
- B. Uncalcified tuberculosis.
- C. Calcified tuberculosis.
- D. Adult type with or without the primary focus.

Group A is very large, and there are several reasons why lesions are not seen.

1. The lesions are too minute to cast a shadow.
2. The lesion may be overshadowed by other structures.
3. The primary focus may not be intrathoracic.

Group B is a small group but an important one and, of course, is one which consists of lesions that are in a state of transition. The primary focus may be seen in any part of one or both lungs.

An area of collateral infiltration may be seen which may obscure the primary focus. This infiltration is pneumonic in type and may vary in size from a small area to an involvement of a whole lobe. The paratracheal, hilar and mediastinal glands may be seen as separate and distinct shadows. The persistency of this lesion along with the glandular shadows would differentiate this from ordinary pneumonia. Serial film examinations will in time show evidences of resolution, or fibrosis and calcification. Unfavorable cases will show evidence of breaking down and perhaps dissemination.

Group C is a large one and is comprised of those lesions which have undergone healing. The outstanding feature of this group is calcification. This invariably is the result of tuberculous disease, and usually indicates a heavy initial exposure to tubercle bacilli. Many of the lesions in this group are limited to the hilus or paratracheal lymph nodes. An oblique view is sometimes necessary to demonstrate their presence. Sometimes a large number of calcified glands will be seen along the ramifications of the descending bronchi. Other lesions are those as have just been described and are associated with a single or multiple Ghon tubercles situated in the parenchyma of the lung. These tubercles may vary in size from a pinhead to a centimetre or more in width. They are usually irregular in outline. It is possible to find a lesion in which the Ghon tubercle alone is present without visible evidence of a lesion at the hilus. It is advisable at this stage to make some reference to the normal root or hilus shadow. The x-ray shadow of a normal hilus is largely that of blood-vessels and the reflected pleural membranes. The bronchi are not visible except when seen end-on when they appear as a small ring about 3 to 5 mm in diameter. Blood-vessels may also be seen end-on which will have the appearance of calcified nodes except that they are perfectly round and will disappear on an oblique view. The so-called "thickened hilus shadow" may only be due to a blurring from an engorgement and motion of its blood-vessels as a result of the cardiac systole at the time of the exposure.

Group D consists of the adult type of disease. The primary focus of infection is very frequently visible.

Laboratory examination for tubercle bacilli:—Culture or guinea-pig inoculation from faeces, stomach washings or sputum will frequently show the presence of tuberculosis, not only in those children suffering from parenchymatous lesions of the lungs but also in those who have no demonstrable lesions in the lungs but only a pleurisy or enlarged tracheobronchial nodes. A caseated tracheobronchial node sometimes breaks into the trachea or a bronchiole. The child swallows the sputum which is brought to the pharynx either by a cough or the ciliary action of the mucosa of the bronchi and trachea. Although gastric-lavage examination gives excellent results yet the examination of the faeces for tubercle seems to be the more desirable method.

Prognosis:—The first-infection type of tuberculosis in childhood invariably results in allergy which makes reinfection dangerous. Most of the children carry this infection into adult life without suspecting its presence.

The reinfection type of tuberculosis in childhood usually results in disability and often in death. This is the adult-type of disease with a grave prognosis.

Prophylaxis:—Such public health measures as are now being employed in the larger centres are already showing their effect by the lowering incidence rate of skin reactors amongst school children. Infection of children is being prevented by controlling the source of infection which is usually the adult with an open cavity, and occasionally, tuberculous milk. Probably, at the present time the most efficient and valuable measure consists of the routine tuberculin test and the x-ray examination of all children, particularly of those who are contacts with known cases of tuberculosis.

Careful supervision of all children who have a childhood type of infection is probably the next most valued measure. In our clinics these children come in for re-examinations at stated intervals of every three to six months. Various other means of control include educational measures, segregation of positive sputum cases, proper inspection and pasteurization of the milk supply, open-air classes and preventoria for the infected and undernourished children, and public health nursing in the schools and homes.

A new method of preventing tuberculosis is being carried out and apparently with considerable success, on the continent and in other countries. It consists of inoculation of the new-born child with BCG, an attenuated strain of living bovine tubercle bacilli. A most interesting work is being carried out at the Johns Hopkins Hospital where infants are being inoculated intramuscularly with heat-killed virulent human tubercle bacilli. Some degree of immunity is in all probability being obtained. But both methods require further time before any final decision can be reached.

Treatment:—The management of the infected child is largely a matter of common sense. All that he requires is a sufficient quantity of food, fresh air and physical rest and sleep. Cod liver oil or halibut liver oil should be taken during the winter and spring months. The supervision of these children should be extended beyond the period of adolescence.

The treatment of the adult type of disease in childhood is essentially the same as that in the adult. However, in view of the serious prognosis in the case of the child, treatment must be vigorous, and the various forms of collapse therapy must be made use of. These cases, therefore, should be hospitalized as soon as diagnosed.

Dr. Florence J. Murray, returned missionary from Korea, is spending her furlough with her parents, Rev. and Mrs. Robert Murray, Sackville, N. S.

Dr. N. H. Gosse, of Halifax, has returned from attending the Interstate Post-graduate Medical Assembly of North America held last month in Detroit. On his way back he stopped off at Kingston where at the Connell Clinic he looked into the "Ensol" treatment of cancer.

Professor R. P. Smith and Dr. C. E. Kinley, of Halifax, have just returned from a motor trip to Ontario where they visited the Connell Clinic. May we hope from this that the "Ensol" question may find some development in the Provincial Laboratory?

The Common Neuroses

K. A. MACKENZIE, M.D.

THE nomenclature of functional nervous disorders is very confusing. Hysteria, the oldest term, originally conveyed the idea that it was etiologically related to disorders of the female reproductive organs. The term is now limited to conditions which are produced by some form of suggestion, and are cured, or theoretically curable by some form of psychotherapy. Certain fits, paralyses, aphonias, mutism, amnesias and other nervous pictures fit into this category. Later the term psychasthenia was introduced with the object of separating cases with purely psychic features, such as obsessions, phobias and anxiety states from the general group. The term now implies a congenital background or inferior mental capital, which follows the patient from birth to the grave and is very resistant to treatment. Still later the term neurasthenia appeared as a new American disease. It implies a train of nervous symptoms, with fatigue as a prominent feature and occurs in patients previously healthy, as the result of physical causes, such as infection or trauma, or psychical causes, such as business, domestic or social worries. Other terms such as anxiety neurosis, psychoneurosis, psychopathic personality, pithiatism have appeared but are somewhat vague in their definition. There is no hard and fast line between these various disorders; nor is the group clearly defined between normal people on the one hand and the major psychoses on the other. They merge imperceptibly into each other. Nor is the line clearly between the neuroses and organic disease of other organs. Goitre, an organic disease has many functional symptoms and many so-called neurotics, after considerable delay, are found to have diabetes, hypertension, cancer, syphilis, tuberculosis, disseminated sclerosis or some obscure infection. Again, epilepsy and Parkinson's disease were long classed as functional until pathological research revealed organic disease. As knowledge further increases it is quite likely that some of our neuroses will be found to have an organic background. The present confusion in the exact meaning of terms fully justifies the use of a very general term such as neurosis and one can at least assume that you know exactly what is meant by the term neurosis, and that the expression "neurotic patient" is reasonably clear.

The plight of the neurotic patient is not a happy one in the present state of our knowledge. Considered by many as a nuisance they receive scant sympathy, as shown by such common expressions as, "I am fed up with so and so"; "she should be spanked" or some more emphatic if less elegant phrase; "I hate to see her come to my office"; "I wish the devil had her". The neurotic is exploited by physician and layman. Treatment too often depends on the mental slant of the healer. The gynecologist suspends the uterus, repairs the perinaeum, removes an ovary or may even do an hysterectomy; the surgeon does an appendectomy nephropexy, gastropexy, colopexy or even a colectomy; the throat specialist removes tonsils; the oculist supplies a pair of attractive glasses; the orthopedist straps the feet and orders special boots. The internist fills his patient with all sorts of organic extracts, ovocoids, testocoids, hormotone, orally, subcutaneously and intravenously. The Ford

like factories which make these preparations bear witness to an extensive use of these and other preparations of doubtful or, at least, overrated value. In the end the neurotic is forced into irregular channels and exploited by many types of charlatans, building up reputations and bank accounts in an incredible manner.

The neurotic has immortalized Coue', Abrams, Lydia Pinkham, and Dr. Chase's. Millions have been spent on pink pills, kidney pills, blood bitters, nerve foods, yeast, etc., etc. Osteopaths, chiropractors and other irregulars owe a large part of their success to the credulity of the neurotic. Even new religions have been founded, notably, Christian Science, founded and developed by Mrs. Eddy, herself a notable neurotic having suffered from a functional paraplegia for four years. It would be interesting indeed to know just what price the neurotic has paid for being neurotic. To whom must they look for help? To the psychologist or psychoanalyst? Not yet. Psychologists are still only on the fringe of knowledge regarding mental processes. They differ in their views, frequently change and revise their theories and a feature of their writings is that they usually extol their own theories and condemn those of their confreers. Such behaviour is very confusing to the practical physician. We can, however, learn much from what they have already taught us and can use many principles just as we use the newly acquired knowledge of pharmacology, physiology and biochemistry. It is my opinion that the hope of the neurotic is more in the hands of rank and file of practitioners than it is in the hands of highly trained psychologists. A reasonable knowledge of well known principles will do a great deal in preventing and curing many common neuroses, and some of these principles are well within reach of every physician. Fifty per cent. of all patients who consult a physician suffer from functional nervous disorders, either in a pure form, or associated with organic disease. More and more should we treat the patient as well as the disease.

The first duty of a physician is to make a correct diagnosis, using all available diagnostic aids. The evidence to be elicited and evaluated falls into two groups. First the evidence of organic disease, which implies a reasonable knowledge of general medicine and especially neurology. This requires no further comment here. Secondly, evidence which enables one to say that a neurosis is present even on superficial examination. For instance, it is easy to diagnose hysteria on inspection in the case of hysterical fits. In all cases however, the patient is entitled to an exhaustive search for evidence of organic factors by taking a careful history and making a thorough physical examination.

Having concluded that a case is functional it matters little whether we call it hysteria, neurasthenia, psychasthenia, anxiety neurosis or some other modern term. What is of great importance is to recognize that many morbid conditions are psychic, in whole or in part and can only be treated successfully by psychic methods. Certain principles are not difficult to understand and the first place should be given to the complex of fear.

Fear is the cause of many neurotic symptoms. The study of fear including the mechanism of its production, physical and mental manifestations and methods of cure are worthy of serious consideration. Fear is something which everyone can understand from personal experience. If one meets a bear in the woods fear, is established with all its varied manifestations—trembling, weakness, rapid pulse, palpitation, rapid breathing, dilated pupils, goose skin, emotional instability such as crying, nausea, vomiting, precipitate urin-

ation and diarrhoea. These are the usual symptoms of the neurotic and in this instance may be considered a normal reaction. Other effects may be noted. By actual experiment we know that the gastric and intestinal juices are altered in quantity and quality, explaining loss of appetite and various digestive disturbances. We also know that the adrenalin content of the blood is increased as part of nature's mechanism for flight. We know that the kidneys secrete more and the salivary glands less than normal. It is almost certain that none of the organs escape the effects of fear. If one sees a stump in the twilight and believes it to be a bear the reaction is identical. It matters not whether the cause of the fear is real or only exists in the mind of the person. Cure is brought about in the first instance, by removal of the cause, namely the bear and in the second instance by proving that the stump is a stump and not a bear. The cure in either case is not immediate as symptoms may persist for a time after the cause is removed. In this illustration we have a clear idea of the mechanism of fear and a useful hint for curative measures. Fear in a patient from any cause, fear of sudden or early death as in heart disease real or imaginary, fear of poverty, failure in the future, is responsible for many neuroses. The duty of the physician is now clear; he must remove that fear by methods collectively known as good psychological technique. The pride of the neurotic should never be wounded by saying that there is nothing the matter, or that it is all imagination. Such an assertion is not true, there is something the matter and it should be carefully explained. A discussion of the physiological effects of fear is a very good way of beginning treatment. It is easily understood and usually excites interest without injury to pride. At all times success or failure depends on whether the patient is convinced that the cause of the fear has no reasonable basis. Methods may vary in detail but not in principle. A painstaking examination is very important, impresses the patient, inspires confidence and prepares the sceptical soil for further explanations. Many physicians do all this as a matter of course, subconsciously, but what can be done by accident can usually be done better by some well ordered scheme. To illustrate these principles one may cite some simple concrete examples.

The Cardiopath. A young person complains of breathlessness, pain in the region of the heart, weakness, palpitation and a rapid pulse. These symptoms are produced by an idea of heart disease, lodged in the patient's mind by some friends or unfortunately in some instances by a doctor, who lays too much stress on a harmless finding such as a murmur, extrasystole or reduplicated sound. The fear complex, with many of its manifestations is therefore established. Treatment falls into two classes, firstly, preventive and secondly curative. One should avoid expressing an opinion on insufficient grounds. A patient of mine once heard a doctor say, while giving an anaesthetic that he would not have started if he had known that she had such a bad heart. The heart was normal. Curative measures consist in convincing the patient that no organic disease is present, a rather difficult problem at times after a contrary opinion has been given. Many patients will say at once that they feel better, or what is more common will acknowledge improvement at a later date.

Again, take the hypertension patient. The announcement of high pressure frequently establishes the fear complex and we are often blamed for telling the patient the truth. The mistake is that we do not tell the whole truth by a full and reasonable explanation. One should follow with some

comforting statements such as—hypertension is quite normal with advancing years; it may be compared to grey hairs; it does not necessarily shorten life and indeed may be essential to good health. They should be told that it can be helped but not cured any more than grey hairs can be restored to normal color. I often quote Osler's paper "on the advantages of albumen in the urine". Knowledge of a defect and appropriate care will add years to life. It is a good thing to make remarks during an examination such as, "you have good lungs", "your heart is strong", "you have many good points". Such remarks have a definite value in eliminating fear. In reporting high tension it is better to say, "the pressure is moderately raised" than to say "your pressure is far too high". Nine out of ten patients will accept an evasive answer and the one who does not is not likely to be a neurotic. Instructions regarding diet, activities and medicine should be given without hurry and a half hour chat is probably the best prescription which you can give. If seen for the first time try and make the patient feel happy and if seen after an indiscreet opinion has been given endeavour to eliminate the fear complex which has been already established. The principles above stated may be used more or less effectively in many other types of cases.

Another principle in psychotherapy is suggestion, or what is called by some persuasion, demonstration or explanation. It is often linked up with fear but is not quite the same thing. To illustrate I cite the case of a girl, aged 11 who did not utter a word for three years. Following a fright when her sister was cut by a fall on a stove she became much alarmed. She was struck dumb and did not speak for three years. The mutism produced by fear, was perpetuated by auto-suggestion. She simply believed that she was unable to speak and resisted many attempts to cure her. Having gained the patient's confidence by conversation and encouragement she was asked to cough. The tone in her cough was called to her attention and very positive assertions of cure were made. She was then asked to say A and O and E. When she heard the sounds she was told that her voice had returned and in a short time she was counting ten and then she talked in a normal manner. In three days she was talking well and has not stopped since. The cure was brought about by suggestion or demonstration. This and other cases, while unusual serve to illustrate what can be done by simple methods and is applicable to many cases of psycho-neurosis. The principles outlined have a wide field of application and may be used by any physician. Unfortunately many cases do not respond to any treatment and it is discouraging to try. Special mention may be made of compensation and pension neuroses in which the unconscious desire for compensation is so strong that most efforts are unavailable.

In conclusion one may reiterate a few simple rules.

Examine the patient for organic disease.

Search for causes of fear and endeavour to combat the fear complex.

Do not wound the patient's pride by saying that there is nothing the matter and that it is all imagination.

Give the patient a sympathetic hearing and listen attentively to the whole story.

Use persuasion in various ways.

Remember that conviction is the basis of cure.

To Those Who Would Be Surgeons

H. L. SCAMMELL, M.D.

IF you ask the average medical student in his final year what he intends to do when he graduates, he will say in the majority of instances that he hopes to take several years of post graduate study with a view to pursuing a specialty. The chance is that if you ask him what that specialty will be he will say "Surgery". I always feel a little bit sorry for this young man. At a time when he has not had a chance to prove himself, to judge his adaptability, he has made a decision which in later years he may deeply regret. Not every person who wishes to become a surgeon succeeds any more than does the aspirant to fame as a musician. Each must try himself and after the trial make his decision honestly.

There is no field in which that trial may be so successfully made as in general practice. Besides the experience of working under circumstances to test his judgment and resourcefulness, the young physician in general practice has a chance to develop his knowledge of medicine, and learn to handle people sick or well. Without a sound fundamental knowledge of medicine, the surgeon is a poorly trained surgeon; without personality, tact, and a knowledge of human nature he will be at best an indifferent success.

Two main objections are raised by the student to approaching his career by this road. In the first place he says that in order to enter general practice he has to spend at least a thousand dollars for a car and equipment, which often must be borrowed. This is not so attractive to many as remaining under the fostering care of an institution where all expenses are paid and perhaps pocket money as well. The second reason he advances is that providing he does go into general practice he becomes quickly bound by social and material obligations which render it difficult or impossible to break away for special study at the end of two or three years. There is much truth in what he says, but it leaves one with the feeling that it is a certain sense of inferiority, lack of confidence if you will, which prevents him from facing the world and its cruel knocks at the start. Rather will he postpone the evil day. This lack of confidence, if it exists, is not wholly to be blamed on him. To some extent he is sharing the spirit of paternalism, its results at least, which is rife in the world to-day. "Do not face issues fearlessly, let the line of least resistance be your path. Believe no longer that 'God helps those who help themselves', but rather 'The Lord will provide'. If you cannot get bread, bread will be gotten for you, so why try very hard anyway." Is not this the subconscious philosophy of the world to-day, and do we not all share it a little?

But it is quite possible that this attitude of the young graduate in medicine is the fault of his medical training. The medical course seems designed nowadays as preparatory to a considerable period of post-graduate training, and students are encouraged to do post-graduate work. One believes that this attitude is not only wrong, but if pursued will lead to evil results. The job of the medical schools should be to turn out safe general practitioners, and if they keep this ideal in mind its realization will not only occupy all their efforts, but result in the increased confidence of the public in the medical profession.

Is it difficult to imagine a medical profession made up wholly of specialists, where the average sick citizen feels his sore spot in a speculative way, and decides to which specialist he will go? Not at all if the present trend is not halted.

Graduates in medicine to-day are prone to think that surgery only started with the advent of Lister and his principles. To show how foolish this is one has only to read the works of our teachers of surgery of the eighteenth century. These men had sound ideas as well, on medical education and in looking for solutions to these problems it is profitable to study the principles they laid down, principles which produced a Cooper, and a Hunter as well as a Lister. Principles require little modernization, and time but proves their worthiness to be called essential truths. As an example let us examine one old text-book of surgery:

It is "A General System of Surgery", by Dr. Laurence Heister, Professor of Physic and Surgery in the University of Helmstadt; the Second Edition, 1745. In his introduction he says, "The end of Surgery is threefold: 1. To preserve mankind in a sound state. 2. The restitution of a sound state if it is wanting. 3. To preserve the life of a man, though it be with a maimed and wounded body, if it is impossible to render it entire again." Can any person better this?

What attributes and preparation must the young surgeon have? Here is the answer of Heister:

1. "Agility of body and resolution of mind." He quotes Celsus to show that the surgeon should be ambidextrous, should operate swiftly, but if necessary deliberately. "But at the same time I would have him behave with such caution as to be guilty of no act of rashness or cruelty, and very carefully avoid giving unnecessary pain."

2. "No one will excel in Surgery unless he is first furnished with a good natural genius, to which he must join a well grounded knowledge in Anatomy and Medicine. They who are not masters of these qualifications will daily be guilty of capital errors."

3. "Being possessed of these foundations for Surgery, a proper attendance upon the lectures of professors, and a due diligence in reading chirurgical authors should be added. Therefore, persons desirous of a thorough knowledge of surgery are not satisfied with visiting cases that may accidentally occur to them in their private practice, but diligently frequent all the hospitals they can gain admittance to; and by this means they see more in one year than they could otherwise do perhaps in the course of their lives. Being prepared by repeated observations of this kind, assisted by the advice of masters, you may at length try your hand, at first upon dead bodies, and afterwards, when you have opportunity, upon diseased persons; for this trite saying will always have its force: 'The artist is not made by reading, meditating or disputing, but by practice.'"

4. "He should diligently avoid the appearance of roughness in his behaviour, or nastiness in his dress; for good breeding and cleanliness have their proper effect in all walks of life; but the surgeon gains a particular confidence with his patient by his address, which has no small share in the success of his endeavours."

How should the surgeon handle a case? Hear the words of Heister:

1. Secure the history of the complaint either from the patient or his friends.
2. Examine the patient carefully.
3. Consider the case, from a working diagnosis, and order treatment. Use first only methods of treatment which are gentle if they are in your opinion sufficient. If more dangerous means must be resorted to explain the need for such to the patient and his friends.
4. If the case "requires the knife" declare it to the patient and secure his consent.
5. In difficult cases he should consult his own and his patient's good and call in consultants.
6. Prepare for the operation out of the patient's sight and hearing.
7. Exclude from the operating room all unnecessary spectators, "because beside the disturbance that they create to the patient, it is to be feared they will very much annoy the operator, by intercepting the light, and filling up the room; besides, should any rudely press upon him while he is performing any nice operation, it might be of the utmost ill consequence."
8. Encourage the patient; operate quickly, but thoroughly; avoid giving the patient unnecessary pain, but endeavour to leave no mischief unremedied.
9. Dress the wound and make the patient comfortable.
10. Prescribe a suitable diet; and make his surroundings agreeable.
11. Exclude causes of worry or annoyance from the patient.
12. Exclude or limit visitors, and if they do visit let them talk rather than the patient.
13. "Cherish the patient with sweet words, and give him hopes for his recovery", but if you are anxious for his welfare tell his relatives.

He concludes his classical admonitions by saying: "Surgery is no easy art, but affords a large field for inquiry, and is not to be acquired without great assiduity and labour. But there is nothing, according to the old adage, but what is to be overcome by industry. We cannot avoid again and again exciting all students of this noble art to diligence and industry, and not to rest satisfied with being able to shave, spread a plaster or open a vein; for I would have them know that not only a good natural sagacity, but great labour and study also are absolutely required to qualify a man for so great a trust as that of taking care of the health of mankind."

Let the young graduate in medicine or the senior student ponder these words of Heister, as true to-day as when they were uttered, before he undertakes to pursue the path that leads to being a surgeon, or to any specialty. For his foundation must be of the soundest, accompanied by natural aptitude and manual dexterity. But once that decision is made he must again remember, ponder, and daily apply Heister's closing words: "Great labour and study also are absolutely required to qualify a man for so great a trust as that of taking care of the health of mankind."

“An Epidemic of Cholera in Halifax, Nova Scotia 1834”

SPASMODIC Cholera appeared in Jassore, one hundred miles northeast of Calcutta, India, in August, 1817, and spread gradually until it reached the American Continent in 1832. At Jassore it was fatal to one-tenth of the population, then it appeared in Calcutta, Delhi and Benares. In 1818 it attacked Bombay, Madras, Mauritius (Isle of France). In 1819 it reached Arracan and Ceylon, later in November Siam, where it was very fatal. In 1819 at Cadiz it occasioned great mortality among the soldiers ready for South America. The infection spread to Borneo and China in 1820, in that same year it reached the Philippine Islands. At Java in 1822, 100,000 were swept away. 60,000 square miles in India were ravaged in one year and in Asia one thousand times that in two years. In 1821 Bombay was revisited, then it moved westward to Europe, to Arabia with terrible mortality, to Persia and Egypt. In 1823 it reached the Caspian Sea. From 1823 to 1830 it did not greatly extend but revisited several places already attacked. From 1817 to 1830 Calcutta was visited yearly. In 1826, during which time there was war in India, Cholera of a mild type broke out among the troops at Arracan, there were 2,000 sick in one camp including many officers. In 1830 it reached the European territories Russia, Poland, Prussia and Germany at Berlin and Hamburg. “In Prussia and Russia the cholera has spared all persons employed in manufactories of tobacco (or snuff), the tar yards and medical laboratories.” The malady did not cross the Rhine and it did not reach Holland until 1832, a country which had hitherto escaped, this being attributed to the extreme cleanliness of its people. On the arrival of the ship “Batavia” with Sir Walter Scott and one hundred other passengers, the engineer died of cholera, and so the disease made its appearance. Reports state that from Hamburg it crept to England reaching Sunderland in 1831, then Scotland and Ireland and appeared suddenly at Paris with 20,000 victims. Eventually it crossed the Atlantic, being carried by the emigrants who were then coming to America in great numbers, and commenced ravaging the American Continent. England suffered less than other places. But it was sufficiently menacing for the Privy Council of London to issue an order setting up a Board of Health at the Royal College of Physicians. On Oct. 27th local Boards of Health were formed as recommended by the Central Board of Health in London, including the mayor, magistrates and physicians. They drew attention to cleanliness and public improvements, hospitals and water systems. Cholera broke out at London in February, 1832, later at Dublin, Cork and Drogheda and continued its ravages on to the American continent. By October cholera was subsiding on the American continent and was now ravaging the coasts of the Pacific.

Cholera morbus appeared in Quebec and Montreal in the summer of 1832. On June 8th a vessel called the “Carricks” from Dublin arrived at Quebec. 39 persons died of cholera on passage and the disease was introduced into Canada, chiefly among the newly arrived emigrants and the poorer classes.

The Quebec emigrant hospital reported, of 259 cases admitted 161 died, of 20 cases at private dwellings 15 died, death came in 5 or 6 hours. Private letters from Quebec described the state of the city as deplorable and utmost alarm prevailed; business was paralysed. Boats from Quebec to Montreal all had cases of cholera, with 5 or 6 deaths on passage up the St. Lawrence. Crews refused to return with their boats to Quebec, respectable inhabitants with their families left town, and a cutting from a newspaper states: "we see nothing but carts with dead, the disease now proves fatal in one or two hours."

The American States bordering on Canada were endeavouring to protect themselves by precautionary measures. At Albany the militia were called out to prevent the contagion from stealing into that city and measures were taken in Somerset County, Maine, by way of the Canada road entering the U. S. A.

The Montreal *Courant* of June reports 1500 cases to 2,000 in that city in three days with 250 deaths. In the summer of 1834 Asiatic Cholera again appeared in Montreal and Quebec, not so severe a type as in 1832 but it had fallen more heavily on the better classes than at any former period.

In Halifax, Nova Scotia, 1832, the alarm spread and a letter to Dr. Howe, in the *Nova Scotian*, complains, "that as cholera is now raging on the continent of America, there is less effectiveness of Quarantine in the harbour than for several years back and that the health officer takes no pains whatever, that no vessel had been reported cleaned, white-washed or fumigated." Another letter from a citizen begged for extra care as so much intercourse with Quebec.

In a resolution dated April 9th, 1832, the members of the Assembly had expressed their readiness to afford at all times such information and aid as may be in their power to assist His Excellency in endeavoring to avert from this province the dreadful malady which is now desolating other countries.

Measures were drawn up in June to prevent its introduction into Nova Scotia. On June 26th, 1832, His Excellency, the Lieutenant Governor, Sir Peregrine Maitland, K.C.B., with the advice of His Majesty's Council ordered that a Board of Health be established in Halifax. A Board was appointed with the title of the "Central Board of Health" and consisted of the following gentlemen:

The Hon. Henry H. Cogswell—President.

Dr. Alan, Inspector of Hospitals } Vice-Presidents.

Dr. Johnson.

The Attorney General.

The Solicitor General.

James Foreman Esq., Dr. Shoreland, Surgeon 96th Reg't., Drs. Hume, A. Wallace Stirling and Gregor, William Cogswell, Esq.—Secretary to the Board.

The Board had free power to make and cause to be observed the rules and regulations necessary for the prevention of disease, and the observance of Quarantine, thus recalling an act which had been passed in 1761 for the prevention of contagious disease. Other Boards of Health were established throughout Nova Scotia in Pictou, Sydney, Arichat, Lunenburg, Liverpool, Yarmouth, Windsor and Annapolis, Digby, Hants, Kings, Cumberland and Antigonish. The Boards to have the same power as the Central but must not be at variance with the regulations of that Board and to report the proceedings to the Central Board.

The first report from the Board of Health was a plea to the citizens to co-operate and help clean the town; to guard against ill-founded reports of the existence of the disease; that the Board will announce the appearance of the disease without delay, and if any peculiar disease should appear in a family to report immediately; that they could not give any cure for the disease but as more was becoming known about it in other parts, it was growing less severe and to live temperate lives was important together with clean habits.

The following valuable means of security were recommended by the Board of Health for adoption: all necessary communication between the infected and healthy to be prevented and so limit the attendants of the sick; overcrowding and badly ventilated houses to be avoided; and if poor and no accommodation at home to send the sick to the temporary hospital. Cholera was the leading subject of conversation. A Quarantine Hospital was established at Halifax and James Comptom Hume was appointed Health Officer with a salary of £20 a month, while employed, with reasonable allowances for expenses. Lieut. David Watson, R.N. was appointed superintendent of Quarantine.

At a Council held July the 14th, 1832, the members of the Assembly were appointed to act as members of the Board of Health for the respective counties and towns throughout the Province.

Cholera Hospitals were suggested and a Council was held at Government House on the 31st day of July, 1832, to consider this question with the following present:

His Excellency the Lieutenant Governor, The Hon. Thomas N. Jeffery, Enos Collins, S. B. Robie, Samuel Cunard, H. H. Cogswell, James Tobin, Joseph Allison, Councillors.

The committee appointed to procure and fit up temporary buildings for Cholera. Report: "They have procured a large airy building in the north end of the town near the Dockyard, Dalhousie College (now the City Hall on the Grand Parade) in the Centre and the north wing of Government House in the South End, in which buildings they had placed iron bedsteads with beds and bedding of all kinds, hospital frannel, dresses for males and females and all such necessary utensils for the comfort of patients. They have also made arrangement for supplying the hospitals with medicines and such other articles as may be necessary for the accommodation of the sick immediately after the actual appearance of the disease. The Committee have also prepared hot baths and specimens of different apparatus to apply internal warmth to the body and one waggon with a heater and covered litters for the removal of the sick to the hospital. They have engaged two male and two female attendants and are making diligent inquiries for such other male and female nurses of good character as may be wanted for serving and attending the sick patients. They would now recommend that the Board make application to His Excellency the Lieut. Governor to appoint at least two medical gentlemen to each hospital to be ready to give their attendance should the disease appear in town."—a true copy, William Cogswell, Secretary. (Sd.) Rt. Hume, Chairman.

On the first appearance of the Asiatic Cholera in Halifax August 1834, the Lunatic Building in the Poor House had been fitted up as a cholera hospital but as the disease was rapidly spreading, this hospital was reported by Drs. Almon and Sawers, the medical gentlemen in charge, to be unfit for the purpose and it was therefore necessary to establish a more suitable place. Dalhousie College was recommended for the purpose but the inhabitants of the

neighbourhood objected as well as some members of the Central Board. A request was made for some other building though His Excellency had previously given his sanction for Dalhousie College.

At a Council held Sept. 4th, 1834, a proclamation was signed by His Excellency Mayor General Sir Colin Campbell, K.C.B., Lieut. Governor of Nova Scotia and a day for a general Fast was appointed. Wednesday the 17th inst. was chosen on the suggestion of the Lord Bishop of the province.

"The Lieutenant Governor taking into consideration the danger with which the province is threatened by the progress of a grievous disease, have resolved, and do, by and with the advice of His Majesty's Council, hereby command a public Day for Fasting and Humiliation be observed on Wednesday the 17th day of the present month of September; that we may all humble ourselves before Almighty God, in order to obtain pardon for our sins and in the most devout and solemn manner send up our prayers and supplications to the Divine Majesty for averting those heavy judgments which our manifold provocations have most justly deserved, and particularly beseeching God to remove from us that grievous disease with which we are at this time visited, and we do strictly charge and command that the said public Fast be reverently and devoutly observed by all His Majesty's loving subjects in this province, as they tender the favor of Almighty God and would avoid his wrath and indignation." Given under the hand and seal at Arms, at Halifax, this 4th day of September 1834, in the 5th year of His Majesty's reign. By His Excellency's command, Rupert D. George.

A resolution was passed to immediately prepare that part of the common allotted in 1833 for the public interment of the dead in consequence of the ravages which the Asiatic Cholera was at that time making. A sum of £250 was requested for inclosing a cemetery. A communication from the Central Board of Health declared that complaints were made that the removal of persons who had died with malignant cholera was resisted by the friends of the deceased and so endangered the town. The following regulations were established and published in the *Royal Gazette*.

"As space, cleanliness and pure air was necessary for the recovery of persons afflicted with the spasmodic cholera and to the safety of those about them, the Dalhousie College having been prepared for the reception of persons afflicted it was ordered that any member of the Board of Health, or Health Warden on the recommendation of any member of the medical profession, had the authority to insist on the removal of the sick and if any opposition was offered, assistance could be given by all magistrates, police officers, constables and others and such regulations to be enforced if resistance was offered, when persons had died of the disease—that the bodies must be buried as quickly as possible and at a safe distance from the town so as not to be a great danger to the public health. These burials to take place as early as possible but in all cases within twelve hours after death. The bodies to be buried in the ground allotted for the purpose at Fort Massey until the new cemetery on the common was enclosed." A fine not exceeding £10 was to be levied in violation of these orders.

In early August, 1834, some alarming cases and deaths in the Poor House caused excitement and rumour that the Asiatic cholera had appeared. On August the 12th the Board of Health looked into the matter and stated that they had no account of any case in existence in the town. Precautions were recommended.

On August 23rd, 1834, several cases of malignant Cholera appeared in the Poor House among the military, and some deaths occurred among the towns people about which medical men differed. Some described it as the common cholera of the country that usually prevails at this time of year.

On August 25th, 1834, at a special session held this day for the purpose of electing and reporting to His Excellency an eligible building for a Cholera Hospital and to take into consideration a letter from the secretary of the province on the subject, those present were: James Tremain, Esq., C.R.; Richard Tremain; D. Head; Rufus Fairbanks; G. N. Russel; John Albro; Matthew Richardson; John Liddell; J. L. Starr; W. H. Roach; J. H. Tidmarsh; John Howe, Jr. Mr. Tremain moved, seconded by Mr. Albro, that the Dalhousie College be recommended as a suitable building for the Cholera Hospital. For the motion: Mr. Tremain, Mr. Starr, Mr. Roach, Mr. Albro, Mr. Head, Mr. Shannon, Mr. Russel, Mr. Tidmarsh, Mr. Richardson and Mr. R. Tremain. Against the motion, Mr. Howe.

Mr. Starr moved, seconded by Mr. Richardson, that it be recommended to the Board of Health to furnish daily to the police officer for the information of the magistrate and public in general, correct statements of the health of the town on the subject of Cholera.

The Rev. Mr. Uniacke offered his school for the sick.

The Lieutenant Governor of Nova Scotia directed the detention of all vessels from Canada at the Quarantine grounds. The Health Wardens ordered the immediate removal of filth and ashes from the town. Objections were made to the placing of dirt and filth in barrels, boxes and tubs opposite the doors.

August 30th. "The malady which last week was making insidious but rather doubtful progress has assumed a more definite shape—extreme alarm prevails in the town and during the past week the mortality has been chiefly among the military especially the Rifle Corps. Of the three regiments of the garrison 34 died, from August 5th to 28th, 29 belonging to the Rifles. The military were removed from King's wharf, as considered unhealthy due to drains in the vicinity of north Barracks being in a filthy state, to the Hall of the Province Building and a party sent to Sackville. Since these changes a reduction in cases was noticed."

Chlorine gas was recommended for purifying the air. Dalhousie College kept a large fire burning in front sending off fumes. The Bane plant was recommended as a cure.

Reports show that from August 6th to 30th the Poor House, Dalhousie Hospital and private practice had over 30 new cases daily. On August 28th, 1834, at a special session of this day were present: James Tremain, Esq., C.R., Rufus Fairbanks, John Liddell, G. N. Russel, W. H. Roach, John Hume, Jr., J. L. Starr, Esquires, to take into consideration the Fish Market.

"The magistrates of Halifax in consequence of several persons having been recently attacked by Cholera while employed in the vicinity of the Fish Market, an apprehensive sour effuvia pervades from premises dangerous to the health of the community, they therefore deem it prudent in the present sickly state of the town to close the said market for a short period. Fishermen, however, will be allowed to dispose of fresh fish in the meantime and at the fish market near the Dockyard and at any of the wharves where they can obtain accommodation."

On the 29th of August at a special session held this day friends of J. Tremain, Esq., C.R., Rufus Fairbanks, Richard Tremain, T. H. Tidmarsh,

W. H. Roach, John Albro, J. L. Starr, John Hume, Jr., met for the purpose of taking into consideration a recommendation from the Board of Health.

Moved by Mr. Albro, seconded by T. H. Tidmarsh, that a public meeting be called at the Exchange Coffee House to-morrow at ten o'clock to consider the above request from the Board of Health. The following rules and regulations were passed this day and directed to be published:

"That from and hereafter this publication resolved that persons must not place or cause to be placed anything such as decayed fish, dead animal or such substance which is to the annoyance of the neighbourhood, upon or near any public Highway, wharf or common dwelling house, building, boat or vessel or any place."

About September 1st there was an increase in deaths, chiefly among the debilitated and intemperate and those who had neglected to call early.

September 6th: The number of recoveries in proportion to the cases was more favorable in Halifax than in other places, due either to a milder type or better management. The disease was more common in the foul spots of the town, where habits were more irregular. The military were again attacked, several cases appearing among the 96th Regiment.

A soup shop was opened to help the poor; a quart of soup and a biscuit for 2d. Subscriptions for relief of poor now amounted upwards to £400.

September 11th: Cholera was now appearing among the townspeople. It yielded to cases who acted in time and carried off fearful proportions of those who neglected it, especially the premonitory symptoms.

September 16th. Cholera was still taking its toll. Dalhousie Hospital kept a large fire burning in front sending off fumes and great terror prevailed among the inhabitants.

September 26th: As Cholera was disappearing and only a few cases left at Dalhousie Hospital, the Board of Health ceased to issue their daily reports and it was hoped the Dalhousie Hospital could be discontinued on Monday next.

September 27th: One hundred and fifteen children were thrown upon the poor house during the week as a result of cholera; many widows needing help also. Some cases of cholera appeared among the blacks at Preston during this epidemic.

"Up to August 28th there were 103 deaths in the military". The following figures show rates of cases and deaths:

Date	New Cases	Deaths
Aug. 31.....	34	18
Sept. 1.....	35	10
" 2.....	21	14
" 3.....	28	18
" 4.....	35	15
" 5.....	44	9
" 6.....	42	15
" 7.....	45	17
" 8.....	44	12
" 9.....	58	16
" 10.....	49	23
" 11.....	36	15
" 12.....	56	5
" 13.....	42	11

Date	New Cases	Deaths
Sept. 14.....	28	19
" 15.....	22	13
" 16.....	23	12
" 17.....	8	5
" 18.....	11	3
" 19.....	14	3
" 20.....	26	5
" 21.....	15	6
" 22.....	7	6
" 23.....	7	1
" 24.....	11	5
" 25.....	9	1
" 26.....	6	3
" 27.....	5	1
Totals	762	284

On Wednesday October 8th Dalhousie Hospital was closed. On October 11th reports show that cholera still lingered but in milder form and no new cases developed during the last twenty-four hours.

So far as records show this is the last of the epidemic at Halifax. The following extracts from the press at that time picture the different interests during the epidemic:

In September 1834 obstructions were intentionally placed across the Mount Thom Road in the district of Pictou to prevent travelling and so prevent the introduction of Cholera into the Eastern section of the province. A proclamation was signed by Mr. Colin Campbell, K.C.B. for the discovery of persons who placed the obstructions on the Pictou Road and a reward of £50 to any person who shall give information which would lead to the apprehension and conviction of the persons principally concerned as it was deemed equally inexpedient and ineffectual to restrict the intercourse between the capital and the interior; "The general experience of Europe and Asia seeming fully to warrant the conclusions, that all methods taken for arresting the progress of this disease from one part of the same territory to another are not only futile but by the distress inseparable from them, ultimately aggravate the calamity which they are designed to prevent." All measures of internal quarantine were abandoned in Europe and no attempt of that nature had been made in Great Britain when the disease appeared there.

Even the merchants advertised cures for this disease and the following treatment was recommended by the Jews: "Take a pint of strong spirits of wine, $\frac{1}{2}$ pint of good white vinegar, add to this one ounce of powdered camphor, 1 ounce of flour of mustard, $\frac{1}{4}$ ounce of ground pepper, a teaspoonful of bruised garlic and $\frac{1}{2}$ ounce of powdered cantharides; mix well in a bottle and expose to sun for 12 hours or in a warm place. Put the patient to bed, immediately rub hands and feet powerfully and uninterruptedly with this liniment; during this operation the patient must drink a glass of strong drink composed of two parts of camomile flowers and one part of balm mint; keep this operation up for 15 minutes (the patient's head and body being kept well covered beneath the bed clothes). He will break out into a profuse perspiration, and must be kept in this state for two or three hours, but on no account allowed to fall asleep. Then move extra covering and he will fall asleep for six or eight hours.

and be accompanied by a gentle perspiration. When he awakes he will feel weak but the disorder will have left entirely; rest and moderate diet to completely restore health. Especial care must be taken that the patient does not lift even a finger above the bed clothes as the slightest chill would cause instant death."

At the House of Commons, London, Dec. 15, 1831, that part of the King's speech which insinuated that the disease was indigenous, excited some surprise and strong remarks among the college of physicians. His object was to ascertain "whether the disease was indigenous or brought into the country; that the latter was the fact he had in his own mind; to be convinced of this, it was necessary to trace its course from Astracan to Hamburg."

Interesting discussions took place at the late meetings of the London Medical Society (1833) concerning the cause of Cholera. Dr. Tytler, a long resident in India, claimed it was due to the use of a bad kind of rice which was used and transported.

In Dublin there was belief in an extraordinary charm against Cholera. "These three days past the country has been in an extraordinary state of excitement; messengers are running and riding through the counties Carlow, Kilkenny, Wicklow, Westmeath, Dublin, King and Queens County, Meath, Wexford and Longford, leaving a small piece of turf (peat fuel) at every cabin with the following exhortation, 'the plague has broken out, take this and when it burns, offer up seven paters, three aves and a credo, in the name of God and the Holy St. John and the plague may be stopped'. Thus the messenger lays each householder under an obligation"; one man yesterday ran 30 miles in the bog of Allen.

Advertisements appeared in the press at Halifax, at that time such as: "anti-cholera plasters", and "Mrs. Adamson has discovered a remedy for cholera which cured 16 malignant cases in succession, without one failure and four of them since 8 o'clock last night (August 30th, 1834); a draught which gives instantaneous relief without any further trouble."

In New York the following remedy was advertised:

"The great number of children who fall victims to cholera, in this season of year, is a strong inducement to publish the following remedy, which has always succeeded when the lax proceeded, not from the effect of worms, the cutting of teeth or from repeated humours. It strengthens the debilitated organs and neutralifies the acrimony of the morbid humour. Put one-half a drachm of salt of tartara in a pint of water, this is all the remedy. Give the patient of this alkaline water every two hours, lengthening the interval of the dose as soon as the complaint begins to abate, which commonly happens the same date.

"To a child one year old two teaspoonfuls for the first dose and afterwards only one teaspoonful, every two hours, in two or three teaspoonfuls of milk and water, sweetened together, increasing the dose according to age, half a teaspoonful more for every year. . . If due attention be given to this remedy hundreds of victims will be snatched from the jaws of death every year."

In the *Nova Scotian*, Halifax, N. S., July 19th, 1832, the following appeared:

"Disinfecting solution of chloride of lime—recommended by the Faculty for the prevention of that terrible disease—cholera—with ample directions for use. Messrs. Humphrey & Co. beg to inform the public that they have for sale at the Apothecaries Hall, 40 doz. of the above disinfecting solution together with a large quantity of the powder of chloride of lime (an article in common use in England) and would recommend that every family should prepare themselves

with this article and fumigate their halls once every morning. Messrs. Humphrey & Co. would also recommend every family to furnish themselves with a flesh brush (also recommended by the Faculty) and a bottle of the tincture of Rhubarb to be at hand in case of a slight attack of diarrhea which should at once be checked as recommended by Drs. Russel and Barry, secretaries to the Board of Health, established by Government at Sunderland. The leading preliminary symptoms noticed by these gentlemen are either diarrhea spasms, apoplectic vertigo and nausea with imperfect vomiting or various combinations of these symptoms. In case the above disease should make its appearance in this province Humphrey & Co. will have in readiness every medicine recommended by the Edinburgh Board of Health, as we give their prescriptions, and which every family should be furnished with, and directions in case medical aid should not be at hand." June 28.

Paris, 1832, a lady writes, "For a great length of time a most unwholesome northeast wind has prevailed which blows into the mouth a peculiar taste of copper; this is the dreadful malaria that destroys and poor ignorant people imagine themselves poisoned."

On August the 23rd, 1834, reference to cholera in India states that the disease still prevails there—"Cholera broke out on the frigate 'Undaunted' which sailed from Madras five weeks ago to bring Lord William Bentinck here but returned yesterday owing to the outbreak of cholera. A hundred men were attacked with nine cases fatal. As long as the ship was before the wind the disease increased, when the captain changed the course 'to haul the wind' as ordered by the surgeon, improvement was immediately observed and now the frigate was free of the disease."

The year 1834 at Halifax ended with a meeting of the Health Wardens. Additional members appointed in August were:

Dr. James Hume, St. Peter's ward.	
Mr. Joseph Howe, St. Paul's ward.	
Mr. S. VanBuskirk	} County Court House ward.
Mr. Jno. Smith	
Mr. William Murdock	} St. John's ward.
Mr. Thomas Duffus	
B. Almon, Esq.	} St. Matthew's ward.
Wm. Smelling, Esq.	
I. G. Creighton, Esq.	North Barracks ward.
Jno. Morrow, Esq.	Jacob to Cornwallis St.
A. G. Fraser, Esq.	} Cornwallis St. to Gerrish.
James Cogswell, Esq.	
Peter P. James, Esq.	North Suburbs.

The following persons were appointed additional Health Officers on September 20th, 1834:

Joseph Wilson, Esq.	County Court House ward.
Robert Gruher, Esq.	} Cornwallis to Gerrish Sts.
William N. Silver, Esq.	
W. M. Deblois, Esq.	South ward.

This meeting was held on Dec. 9th, 1834, when the Health Wardens submitted a report pointing out the most efficient way to suppress contagious diseases, viz. (1) the power to authorize certain persons to take charge of and clean the streets now in good condition.

- (2) Public Sewers with open grates should have traps to prevent the escape of the frightful stench.
- (3) That many dwellings should be renovated and cleaned as uninhabitable.
- (4) That the slaughter house should be placed within certain limits of the town.
- (5) That the fish market should not sell bad or stale fish, which was the chief food of the poor in summer.
- (6) That the provincial acts under which the Health Wardens have been appointed are defective; that difficulty has arisen in convicting offenders under these acts; that it should be under a Justice of the Peace rather than the Health Wardens but the Health Warden should be a competent witness.

Acknowledgment. We are indebted to Professor D. C. Harvey, Provincial Archivist, and his staff, for their courtesy and the privilege of using the records in his charge.

M. H. L. G. and H. G. G.

Doctors to Arctic.

The annual government patrol of the Eastern Arctic this year was enlarged to include special investigation of health problems in the territory. The Expedition which left Montreal on July 13th included among its members three doctors, Arthur Richard, ship's doctor, C. C. Birchard, and I. M. Rabinovitch who investigated Eskimo health conditions. Dr. Richard inspected the Eskimo encampment at Ungava Bay, which has a population of slightly less than a thousand and is one of the largest Eskimo settlements in the world. The other two physicians made a general study of the health of the Eskimo population with special reference to diet and nutrition.

The Nova Scotia Medical Bulletin

Official Organ of The Medical Society of Nova Scotia.

Published on the 5th of each month and mailed to all physicians and hospitals in Nova Scotia Advertising forms close on the 15th of the preceding month. All Mss should be in the hands of the Business Editor on or before the 10th of the month. Subscription Price:—\$3.00 per year

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and the Secretaries of Local Societies

VOL. XIV.

NOVEMBER 1935

No. 11

ENSOL

FEW things in recent Canadian Medicine have given more occasion for conversation and speculation than have the reports which have emanated from Kingston, Ontario, during the last couple of months.

Our first intimation that anything disturbing was being generated came from a legal friend who had been a visitor to Kingston. On his return several months ago he said "Watch Ensol, they're working wonders with it in Cancer cases". Later, the newspapers began to give glowing accounts of its almost miraculous properties, and finally the October number of the C. M. A. J. carried a preliminary report from the parent of this much heralded child.

The story seems to be that Dr. Hendry Connell, an ophthalmologist, while working upon possibilities for the hydrolysis of cataracts found that by growing proteolytic micro-organisms on a medium of lens protein, there was produced a solution containing an enzyme, the proteolytic properties of which were specific for that particular protein.

The application of this to cancer readily suggested itself and the growth of such organisms upon sterile cancer tissue, dissected as free as possible from normal tissue, would, it was hoped, produce a proteolytic enzyme of specific action against cancer cells. The organism finally employed was *B. Histolyticus*. It is cultured anaerobically, the products of incubation are filtered (Berkefeld) and the filtrate is the "Ensol" of present clinical use, a use which it is claimed, is effecting most remarkable clinical improvement in cases of advanced malignancy.

Like the Queen of Sheba who had heard of the fame of Solomon, we decided to see for ourselves. Consequently, we stopped off at Kingston on our return from Detroit last month and were there very kindly received by Dr. Connell, Dr. Mundell, Dr. Austin, and others.

What are the impressions that one derived? The most undesirable and certainly premature publicity given to their work tended, as it invariably does in any medical discovery, to make us sceptical of its authorship. We believe that in this case the publicity came about through a patient, who

finding herself greatly improved, or, as she believed, cured, couldn't resist the temptation to proclaim it from the housetops. (Readers who know human nature will be familiar with that urge). There is some indication that short of being desirable to the workers it was even embarrassing.

There seems to be no doubt whatsoever but that remarkable clinical results are being achieved in many cases. Masses in many parts of the body, proven malignant by biopsy, some of them lesions that practically obstruct the lumen of the digestive tract, are very greatly reduced—clinically to the vanishing point—bleeding is stopped, weight loss is transposed to weight gain, and a source of well-being is engendered. That is not true in every case apparently, but that it should occur in any case is, of course, most remarkable.

But is it a cure? That is the question that everyone is asking, and to which, at the moment, no answer is forthcoming. Indeed, in the very nature of things, there can be no answer, any more than there can be a positive word immediately after we have seen a cancer melt into apparent nothingness from the action of radium or the scalpel. In both is the factor of time necessary.

Unfortunately *there is as yet no evidence that biopsy following treatment with Ensol shows absence of cancer cells.* It is suggested, therefore, that histological cure has, so far, not been obtained, even in the presence of apparent clinical cure. We shall look anxiously to be shown that this is wrong.

The present preparation is made from human cancer tissue. It is suggested that an autogenous Ensol is best, but since frequently that is impossible of attainment it has been shown that a supply of breast cancers would give an Ensol suitable for use in growths of other epithelial types. In this connection the matter of a supply of such malignant tissue becomes a very important one, for if many cases are to be treated, or if cases require prolonged treatment as, it would seem, many of them do, then it is easily possible that the supply of Ensol might well be exhausted for lack of cancer tissue.

The question of obtaining supplies of Ensol from other sources then arises. Can the tumors of lower animals, which can be grown to order, be employed with results equivalent to those produced by the use of human tissue? Still other questions, bio-chemical and clinical, present themselves; what is this substance that is produced? *Is it*, as is suggested, an enzyme? Or is it something which can be isolated, which may be shown to be susceptible of clinical analysis and which may admit of synthesis? If not, how is its manufacture to be continued to adequate amount? Is the substance in any event to constitute a cure for cancer, or may it not be rather of the nature of Insulin, or, for closer analogy, like liver in pernicious anaemia, requiring to be given at intervals to maintain the good that has been gained. Unfortunately the analogy cannot be carried further, for while the use of these supplies substances normal to the healthy body, the concentration of which to a certain level is essential to life, Ensol supplies a *foreign* substance, which, so far as we know, has no place in our normal human economy. In consequence of this then may it not be expected that resistance to its action would in time arise, and the tissue break away from its control? Obviously this is a good subject for philosophic speculation and that costs less than the usual kind.

One was glad to note the way in which the Kingston men appeared to be conducting their clinical work. They impressed us as being anxious to do everything as ethically as possible. There was little or no disposition to display the laboratory side of things, but we gathered the impression that

Kingston would find it difficult to solve the many bio-chemical problems with which the matter bristles. We were glad, therefore, to hear while there that the Franklin Institute of Philadelphia would be taking on that phase of the work. This, it was felt, would ensure its development to its proper conclusion. The statement made to us by excellent authority that the *patents were sold to the Franklin Institute* caused us to raise editorial eyebrows, but because of insufficient knowledge as to the part Ontario or Canada has played in this we are not competent to discuss that phase of it.

This matter has been widely discussed by Journals of both continents. In some instances it has been given very short shrift, we think unjustly so. In no instance to date, except in our C. M. A. Journal, have we noticed any support. We agree that there is here much room for healthy scepticism, and healthy scepticism is an essential attribute of our profession. We cannot but wonder, however, whether as a class medical men in these times are not coming a bit too much "from Missouri" and whether in such a case as this a little more sympathetic watchfulness would not be more becoming. At all events, it is a most interesting chapter in current medical history, and since it touches one of our biggest needs, it is most devoutly to be hoped that it may attain to a most satisfactory development.

The Importance of Reading.

How are the brains to be strengthened, the sense quickened, the genius awakened, the affections raised—the whole man turned to the best account for the cure of his fellow-men? How are you, when physic and physiology are increasing so marvellously, and when the burden of knowledge, . . . is so infinite; how are you to . . . bear up under all, and use it as not abusing it, or being abused by it?

If our young medical student would take our advice, and for an hour or two twice a week take up a volume of Shakespeare, Cervantes, Milton, Dryden, Pope, Cowper, Montaigne, Addison, Defoe, Goldsmith, Fielding, Scott, Charles Lamb, Macaulay, Jeffrey, Sydney Smith, Helps, Thackeray, etc., not to mention authors on deeper and more sacred subjects—they would have happier and healthier minds, and make none the worse doctors.

We all know too well that our Art is long, broad, and deep . . . and our little hour, brief and uncertain, therefore, we would recommend those books as a sort of game of the mind . . . getting fresh, strong views of worn out, old things, and, above all, learning the right use of their reason, and by knowing their own ignorance and weakness, finding true knowledge and strength . . . You must eat the book, you must crush it, and cut it with your teeth and swallow it.—John Brown, M.D.

CASE REPORTS

Acute Lymphatic Leukaemia With Aleukaemic Phase.

F. K. a boy aged 16, was admitted September 23rd, 1935, as an ambulance case, complaining of severe nose bleed, vomiting of blood, and pain in the abdomen.

With nothing of note in the family or previous personal history, it appeared that the present illness had begun six weeks previously, when swollen and at first painful glands appeared on each side of his neck. During the period of swollen glands he was aware of an increasing weakness, but this was not severe enough to prevent him from working as a caddy, which he did up until the day before his admission.

On that day he noticed two large bruise-like patches on his right shin. There was no injury.

On the day of admission he had bled from the nose for several hours, and had vomited large amounts of blood. In the evening, on admission, he was markedly anaemic and weak, and was suffering severe pain in the upper part of the abdomen.

Inspection revealed many small purpuric maculae and petechiae widely distributed over the body, but more numerous on the legs and feet. There were two ecchymotic areas on the right shin, each over one inch in diameter.

Enlarged lymph nodes were found in the anterior and posterior triangles of the neck, in both axillae, in both groins, and elsewhere. These glands were painless, discrete and unattached to the skin. They varied in size from that of a pea to four times that size.

There was marked tenderness in the upper part of the abdomen, and more in the left hypochondrium than elsewhere. The spleen was doubtfully palpable.

For three or four days after admission the temperature was sub-normal, then rising to a maximum of 101°F., the usual daily rise throughout his illness being to 100°F.

The blood picture on September 24th was—

R.B.C. 3,320,000; Hgb. 63%; Colour Index -1; W.B.C. 158,000; Polys. 4.3%; Small Lymphocytes 90.3%; Lymphoblasts, a few; Large Monos. 5%; Eosinophiles 0; Basophiles 0.

Subsequent blood counts were as follows:—

	R.B.C.	Hgb.	Color Index	W.B.C.	Polys.	Small Lymphos.	Lympho-blasts	Monos.	Eos.	Baso.
Oct. 4th ...				9,200	39.5%	53%	0	5.5%	2%	0
" 7th ...				7,800	60.5%	35%	0	4%	0	.5%
" 8th ...	2,100,000	42%	1	4,350	44%	50.3%	0	4.1%	1%	0
" 12th ...					56.3%	38.3%	0	5%	0	.4%
" 14th ...	2,810,000	48%	-1	12,600						
" 18th ...	3,420,000	52%	.8	116,000	15%	71%	12%	2%	0	0
" 23rd ...	3,336,000	57%	.9	79,000	11%	85%	0	2%	1.5%	.5%
" 26th ...	2,990,000	47%	.8	233,000	6.5%	89%	(a few)	4.5%	0	0

The red cells throughout showed the changes in size, shape, and staining reaction, characteristic of a profound secondary anaemia.

Other laboratory findings:—

Sept. 30th—Urine negative for Bence-Jones Albumose.

Oct. 4th—Urine negative for Tubercle Bacilli.

Oct. 12th—Kahn and Hinton tests negative.
Oct. 15th—Blood Platelet count—265,240 per c.m.m.
Oct. 15th—Biopsy report (cervical gland)—“The histological appearances here support the diagnosis of lymphatic leukaemia in an aleukaemic stage. Many capillaries are filled with lymphocytes and the gland stroma is over-run with them. There is nothing to indicate a lymphosarcoma, or a true Hodgkin's disease or lymphadenoma.”

Oct. 19th—Blood calcium—12 mg. per 100 c.c.

The basal metabolic rate on October 7th was +10.

Referring to the above blood counts, it will be noted that from October 4th to 14th they show a marked drop in the number of white cells from that of the original count of September 24th, a lowering of the percentage of small lymphocytes, and an increase in the polynuclears. The red cells between these dates were always below three million.

During this period there was a remarkable apparent improvement in the patient's condition. His abdominal pain lessened. He was much brighter and took nourishment fairly well. The lymph glands definitely decreased in size everywhere. The purpuric spots, with the exception of the ecchymoses, cleared up. There continued, however, slight nose bleedings. On October 9th he complained of tooth-ache, which continued with severity for several days. A peri-dental abscess developed around a molar tooth of the lower jaw. This was incised on October 14th and about 3 c.c. of pus evacuated.

Referring again to the blood counts—from October 18th onward the typical picture with high total white count and preponderance of small lymphocytes, is restored. The abdominal pain again became severe and the spleen was definitely palpable. The lymph glands did not again increase in size. Weakness and emaciation increased rapidly. Mild delirium and coma supervened, and death occurred on October 29th.

A peculiar finding in this case was a horn-like exostosis at the upper part of the right tibia, inner aspect. It was not tender and was first noticed on October 10th. X-ray examination disclosed “a moderate generalized decalcification of bones, with marked outward bowing of both tibiae, somewhat more pronounced on the right”.

The marked change which occurred midway in the course, with abatement of symptoms and altered blood counts, is attributed to the pyogenic peridental infection. Such infections are well recognized factors in the production of an aleukaemic phase in this disease.

J. R. CORSTON, M.D.

Infraction of the Brain.

F. D. male aged 13 months. Admitted to Hospital October 9th, 1935.
Complaints: convulsions.

First took convulsions at the age of six months, attributed to teething, subsequently had convulsions every time a tooth erupted, but was apparently quite well in every way between these times.

Three days before admission he had a convulsion, which lasted two hours; since he had been irritable, had resented handling, had lain with head drawn back and eyes closed and had had repeated convulsions; and was sent in by his physician for study with a tentative diagnosis of meningitis.

His past history is not helpful, as apart from the convulsions at teething he has always been well and has developed normally both physically and mentally. There was no history of recent or remote infection and no recognized earache or otorrhoea.

Examination: a well nourished, normally developed baby boy, but very pale, no purpura, no adenopathy, no splenomegaly, lying on side with eyes closed and in coma. The nose, ears, lungs, heart and abdominal viscera showed nothing out of the way. The body was generally flaccid except for slight stiffness of the neck on flexion; Kernig's sign was negative. The temperature varied from 100 to 101, and the pulse from 130 to 110, and the respirations from 30 to 40 during the four days the child was alive in hospital.

On examining the nervous system as far as it could be done in an unconscious baby, there were found: right fundus vessels were greatly swollen, the left were normal; pupils small but reacted to light and accommodation. The left side of the face was flaccid and very weak and the left arm was flaccid and definitely paralysed. The left leg seemed normal; and sensation was apparently normal, of course, it was difficult to be sure of this. The child swallowed fairly well what little fluid he took; occasional vomiting; the bladder and bowels seemed to be normal; all the tendon reflexes were unobtainable, likewise the abdominal and the cremasteric. There was no encephalic cry.

The laboratory data was as follows:

Spinal Fluid.....	Yellowish and cloudy.
Cells.....	3.
Protein.....	166 mg. per 100 ml.
Copper reduction.....	Normal.
Chlorides.....	740 mg. per 100 ml.
Lange curve.....	0000110000.
Khan test.....	Negative.
Numerous red cells.	

Red Blood Cells 3,100,000; White blood cells 11,900; Hg. 50%.

X-Ray of skull negative.

Four days after admission without any appreciable change except deepening coma obit.

The clinical diagnosis was old hemorrhage of the brain, subcortical, right cerebral hemisphere.

Post Mortem Report:

Autopsy performed by Dr. McCurdy 13th October, 1935.

General Appearance: The body was that of an anaemic, fairly well nourished male of about stated age. The pupils were equal and of normal size. Rogor Mortis was present.

Head: On removing the calvarium and dura mater a large subarachnoid haemorrhage area was seen in the right parietal lobe, it measured about $4\frac{1}{2}'' \times 3''$, over its surface there was a network of thin distended thrombosed vessels. At the periphery of this area, numerous small punctiform haemorrhages were seen in the cerebral cortex. The right posterior cerebral artery and the right cavernous sinus are thrombosed.

On section an area of old red infarction was noted in the right occipital lobe, extending anteriorly from this there is an extensive area of softening which reaches the level of the optic thalamus. Throughout the area of softening there are numerous small hemorrhages.

Thorax: The right pleural cavity did not contain any fluid and the pleura appeared normal. The right lung was lying free, when removed it appeared well aerated, there were a few reddish areas of congestion over its surface, but no areas of consolidation were detected. On section

it was oedematous and there was a slight degree of congestion present. The left pleural cavity and the left lung showed the changes as described for the right.

Heart: The pericardial sac contained a small quantity of clear serous fluid. The heart was of normal size. The right ventricle was slightly dilated and contained a small amount of blood clot. The pulmonary and the tricuspid valves appeared normal. The left auricle and ventricle and the aortic and pulmonary valves showed nil of note. The myocardium was anaemic.

Abdomen: liver: The liver was of normal size, smooth regular surface and pale in colour. On section there appeared to be a moderate degree of fatty degeneration present. The gall bladder and ducts were normal.

Stomach: Nil of note. The *spleen* was of normal size and rather soft in consistency. On section it was soft and friable and rather pinkish in colour. The Malphigian bodies appeared hyperplastic. *Adrenals:* Nil of note.

Kidneys were of normal size, their capsules stripped readily and left a pale smooth surface. On section the cortex was pale and the medulla slightly congested.

Histological Section.

Brain: Sections from the right occipital lobe reveal an area of old red infarction. The surrounding brain substance is the seat of marked congestion and oedema. In many areas the white and grey matters have undergone colliquative necrosis.

The Thrombus in the right cavernous sinus consists for the most part of fused platelets with a moderate admixture of red blood cells and fibrin.

The thrombus from the dilated subarachnoid vessels consist of fibrin and red blood cells, plus a smaller proportion of platelets.

The liver is the seat of a marked degree of fatty degeneration. The portal tracts are infiltrated with lymphocytes and mononuclears and there is also a slight increase in fibrous tissue. *The gall bladder* and bile ducts appear normal.

Spleen: The Malphigian bodies are very hyperplastic and their margins are very indefinite and merge with the pulp which is also diffusely infiltrated with lymphocytes. There is no increase in fibrous tissue.

Kidneys: The convoluted tubules and the limbs of Henle's loop are the seat of some cloudy swelling and fatty degeneration.

Diagnosis: The autopsy findings would suggest that the first lesion was a thrombosis of the right posterior cerebral artery, with a subsequent infarction and compensatory dilatation of the subarachnoid vessels, which later became thrombosed and resulted in the death of the patient. The presence of the chronic hepatitis and the hyperplasia of the spleen would suggest that the cause for the thrombosis was a low grade blood stream infection.

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

M. J. CARNEY, M. D.

Brain Abscess.

Victor F. age 9 years. Admitted July 23rd, 1935.

He was admitted to hospital for the treatment of ear condition and headache. The child was always well until about the second or third of July of this year, when he was struck behind the *right* ear with a small stone, presumably thrown by another boy. There was some bruising and the skin was slightly broken, but apparently nothing very much, and the injury healed quickly and satisfactorily. However, about four or five days later he began to have severe headaches, and would vomit with these, and about the same time that the headaches began, or a day or two later, his *left* ear started to discharge. This was treated by an aurist and on admission the discharge has almost ceased, but the headaches continued.

He remained in hospital for seven days when he was taken away by his parents. There was very slight otorrhoea, only occasional complaint of

headache; the first two days his temperature rose to 100 after which it was normal. Pulse in proportion to the fever, respirations 25.

He was pale and rather thin, did not complain much, was rather dull, at times lethargic but quite normal intelligence and he brightened up considerably before his discharge. Lymph nodes were not enlarged; head, thorax and extremities normal, lungs and heart normal. Liver and spleen not enlarged. The nervous system showed nothing remarkable except perhaps a little stiffness of the neck on flexion; tendon reflexes normal; eyes active to light and accommodation. Tongue, mouth and pharynx negative. No nasal obstruction or rhinorrhoea. Some discharge from the left ear, right ear normal. There was no mastoid tenderness or swelling. X-Ray report. Examination of mastoid region shows diffuse haziness of left mastoid with almost complete obliteration of cell structure. Our Specialist gave it as his opinion that there was no evidence of mastoiditis. The child was not irritable and there was no vomiting, etc., to suggest increased intracranial pressure or cerebral irritation.

He was discharged from hospital on the 29th of July, six days after admission and was brought in again by ambulance on August 1st. His mother stated that on his discharge he was complaining of headache and that this gradually became worse. Some head retraction occurred and he screamed frequently, especially at night. A physician was consulted and advised admission to hospital.

On admission he was dull and lethargic. He lay on his side, legs flexed, head drawn backwards, eyes closed, face pale, uttering occasionally a sob or cry. The general examination apart from the C. N. S. was negative. There was no discharge from the left ear.

In brief the examination of the nervous system showed: headache, dullness, but not coma; well marked head retraction, both Kernigs positive, increased tendon reflexes in the legs, irritability on being bothered and nothing else definite. Once or twice a positive Babinski was reported but was certainly not definite or constant. The eye grounds were examined and found normal and the ears were again gone over and our Specialist reported; "No discharge left ear, drum healed, slight congestion of middle ear remaining. No mastoid tenderness. Hearing good. No prolapse of posterior canal wall. Would not consider any evidence of suppuration mastoid. X-Ray naturally shows haziness in presence of acute O.M."

Lumbar puncture was done on August 2nd; reported:

Appearance.....	Clear.
Cell count.....	100.
Protein.....	133 mg per 100 ml.
Copper reduction.....	Normal.
Chlorides.....	730 mg per 100 ml.
Lange curve.....	1112343332.
Kahn test.....	Negative.

Cells are entirely mononuclear; no organisms seen. It was done again on the 9th as follows:

Appearance.....	Clear.
Cell count.....	20.
Copper reduction.....	Normal.
Protein.....	50 mg per 100 ml.

Chlorides.....	670 mg per 100 ml.
Lange curve.....	0012221100.
Kahn test.....	Negative.
Red Blood cells.....	a few.

The physical findings remained much about the same from his admission on the first of the month to the 16th, though he was at times much dehydrated and had to be given fluid both interstitially and intravenously and he had occasionally generalized convulsions. At no time did he run any temperature, and the leucocyte count varied from 9,200 to 18,000. And his blood pressure did not rise higher than 122.

On the 16th a consultation was held and it was decided that the boy's chances of recovery were about nil unless something radical was done, as by this time it was pretty definite that he had a tumour or abscess of the brain, and because of the ear infection, an abscess seemed the most probable; and because of the lack of motor signs a cerebellar site rather than a cerebral position was considered the more likely. Therefore on the 16th a suboccipital decompression was carried out and exploration of cerebellum revealed pus at a depth of six centimeters. A drainage tube was inserted. The laboratory report of the pus was: Direct smears revealed the presence of many pus cells numerous diplococci and an occasional chain of streptococci. Cultured; proved sterile. And a guinea pig inoculated was alive after three weeks.

Patient got along very well indeed until the 30th when he began to scream and cry with pain in head, and a serious complication was feared, such as meningitis. A lumbar puncture was done next day as follows:

Appearance.....	Clear.
Cell count.....	52.
Protein.....	250 mg per 100 ml.
Copper reduction.....	Normal.
Chlorides.....	700 mg. per 100 ml.
Lange curve.....	1111233333.
Kahn test.....	Negative.
Red blood cells.....	a few.

The effect of the puncture was magical, the headaches cleared at once, and from this time on convalescence was rapid. By the second of October, 16 days after operation, the patient was sitting up and was discharged on the 6th October with wound completely healed, without complaints, thin but cheerful. So far he has not been heard from.

Diagnosis: Intracranial abscess, cerebellar.

Result—apparent cure.

M. J. CARNEY, M.D.

Wants Help Given to Medical Pupils.

Through lack of funds, hundreds of young men who might be leaders in medicine and benefit the human race are prevented from entering medicine. Professor Harry N. Holmes of Oberlin College told the opening meeting in Hart House theatre, October 28th, of the 46th annual convention of the Association of American Medical Colleges, which continued for three days. Professor Holmes did not call upon the medical schools to finance this type of student showing signs of genius, but called the attention of wealthy foundations to the problem.—*Montreal Star*.

The BULLETIN FORUM

The Official Organ of the Medical Society of Nova Scotia.

IN the first place it will be noted that the BULLETIN was first issued by the General Secretary of the Provincial Society for the purpose of advising members of the Profession of the transactions of the Society. To this was soon added some items of personal interest. After one year it became quite evident that it should be a regular publication, that its scope should be broadened and advertising should be solicited to help defray the cost of publication. Within two or three years the BULLETIN became the most welcome visitor to the home of the doctor and his family. Within the last two years enough additional advertising has been secured to make the publication self-sustaining. Unfortunately at the same time the reading matter has been curtailed to an average of 50 pages approximately, a decrease of from 12 to 16 pages. At the same time the variety of contents has been materially lessened, being now mostly scientific in the form of case reports and strikingly devoid of what may be termed the personal interest in community matters that doctors are vitally concerned with every day of their lives.

What should be the general objects and aims of a medical Journal published by the Medical Society of Nova Scotia? The field is too small to maintain one of scientific value only. The Province is too small to have any class ignore the occupations or the ideas or interests of the entire community. We need in Nova Scotia more team work of all who have the interests of our Province at heart. To accomplish this we must know what others are doing, especially along lines more or less intimately related to the practice of Medicine.

There are many economic and social problems facing the peoples of the world to-day and we are indeed living in a Changing World, as the Commissioner of the Salvation Army has recently told the world. Not only the world, but Canada, also Nova Scotia. This applies to the various avocations of the people everywhere, and we can see it in our own circle of activity. Moreover, there is a very vital relation between the medical profession and the problems that the people in Nova Scotia are trying to solve at the present time. The BULLETIN should be largely devoted to the consideration of these problems of community interest. There is every reason why the doctors should take part in all consideration of these questions and, perhaps, take a leading part in finding the proper solution for many of them.

A perusal of the newspapers of the day will show what the community needs, or what the Journalists believe is needed, and believe me this profession has rare judgment in knowing what the people need as well as in leading, one way or another. Here is the cue for the publication of a medical journal. In the realm of disease, health, or kindred topics, no matter how bizarre or beneficent, possible or mistaken, or of what significance, anything is given publicity in the press. The newspapers know what the people want to read, or what they should read, and that is what they are given. But these journalists are not specialists in all lines of modern activity, they cannot always tell the good from the bad, or unimportant, in matters relating to health.

Hence the BULLETIN should be their official guide and its opinions quoted as the highest local authority. At present its contents are no guide whatever to the reading public, and it makes no impression upon the public.

The field that the BULLETIN should occupy is that which engages the attention of the allied professions and certain philanthropic organizations. The medical profession needs information regarding the doings of these various bodies, and they need our advice. Yet there seems to be a tendency for the profession to keep to itself, even in 'splendid isolation'. This is a fact that we must recognize,—that no man liveth to himself, we must take our share of responsibility for the present condition of affairs, regarding which there is little to be proud of, and the outlook is not bright.

The physical welfare of the community is the chief duty of the medical profession, and the people look to us for leadership. If we do not take it now, when the public is open to reason, the time may come when our voice will be ignored. The opinions of the profession, as expressed in the BULLETIN, would be given universal approval by the press. But as long as the BULLETIN confines itself to the single purpose of recording the doings and recording their own scientific experiences, it will never become the influential factor in the education of the public in all matters in which medical opinion is of the greatest value.

The BULLETIN, to accomplish this purpose, should devote a large section to Public Health that could be well sponsored by the N. S. Minister of Health. One feature of this section might well be an outline for practical addresses on health topics, that the profession in Nova Scotia could use for their sermon notes, in addresses to Women's Institutes and kindred organizations. Use might be made of this section to utter the needed words of caution that the public be not misled by the credulous lay press, and to utter warnings as to the extravagant claims of patent medicines and the equally absurd claims of the unqualified practitioner of medicine.

The work of hospitals and the work of the nursing profession should have a vigorous support, and the reading of the BULLETIN a matter of business for those engaged in these occupations. Then there is further need of the development of the historical side of medicine especially in Nova Scotia, and a participation by the Society in many other philanthropic organizations, as the Red Cross, the V. O. N., I. O. D. E., the Catholic League and others.

Socialized Medicine should be a live topic if the BULLETIN is to give leadership, and it will be better to have the new system of our making, than to have something raw thrust upon us by the inexorable trend of events. Are we alone, who will be called upon to furnish the medical care of the future, to remain silent as to what this changing world is about to thrust upon us?

Perchance a reference to the scientific may be accepted in the spirit in which it is offered. Would it not be a good idea for our very best surgical and medical authorities to at least once every three months analyze the many interesting case reports, and present to the profession the lessons that may be learned from these very valuable reports. Without this they appear to be like lone voices crying in the wilderness. Surely they need to be summarized and their teachings emphasized.

This means, of course, a greatly enlarged BULLETIN, but, with the adoption of sections of value to allied vocations, including Pharmacy, which was inadvertently omitted, both the subscription and advertising list could be further increased. However, the BULLETIN was never intended to be a paying invest-

ment in dollars and cents, it should be primarily a Service Journal,—the further contribution to the people of Nova Scotia by the Medical Society of Nova Scotia.

S. L. WALKER.

EDITOR'S NOTE—This Journal acknowledges Dr. Walker as its spiritual sire. During its infancy it was nurtured by him and taught to walk. In the process of time, when Dr. Walker became incapacitated, guardians were appointed for the offspring and the child is now adolescent.

That it did not as a child always walk circumspectly was, of course, a quite natural phenomenon, but now under other direction it would seem that it must burst forth into the roseate bloom of beatific perfection.

The relationship of *le pere Dionne* to his quintuplets finds a close analogy here and our sympathy is excited for both. In sympathy, therefore, and in filial duty the BULLETIN receives the admonitions of its procreator and is grateful for his kindly purpose and parental interest. It hopes, however, that it will occasion his paternal heart no grief if in the exercise of some of the prerogative to which adolescence entitles it, it finds it impracticable to adopt all of his kind suggestions. Youth is like that! However, out of the mouths of babes may sometimes come wisdom, and we think that to refrain from preaching or practising in Nova Scotia the heresy of *publishing the journal at a loss* constitutes for that wisdom a very excellent example.

We were happy to have met our genial friend in Truro recently and though he evidences rather more of the approach of winter, it was apparent that he retains his usual virility of mind, wealth of ideas and facility of diction. May they long live with him!

Meanwhile the BULLETIN appreciates his interest and his help and hopes it may continue.

River Hebert, N. S.,
October 28th, 1935.

DR. N. H. GOSSE,
Editor, Medical Bulletin,
Halifax, N. S.

Dear Dr. Gosse:—

The N. S. Medical Bulletin has been coming under Dr. Rockwell's name and address since his death one year ago. If I thought of it in my sorrow and distress, it was to feel when his subscription expired, that it would be discontinued. This has not happened, and will you please have the subscription discontinued, and let me know what I may owe for copies sent since subscription expired.

The discontinuing of the BULLETIN will be another change and loss in the home. I have enjoyed much of its contents, often reading aloud, or Dr. Rockwell read articles from it to me aloud, and we kept in touch with fellow practitioners and their families a bit in Nova Scotia also.

I have kept back numbers and at any time they are needed, if I have what is sought, I will be very glad to supply them.

I am sorry I did not get around to this duty at an earlier date.

Sincerely yours,

(Sgd.) L. BELL ROCKWELL.

(Mrs. Wm. Rockwell).

Department of the Public Health

PROVINCE OF NOVA SCOTIA

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

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Chief Health Officer - - - - **DR. P. S. CAMPBELL, Halifax.**
Divisional Medical Health Officer - - - - **DR. C. M. BAYNE, Sydney.**
Divisional Medical Health Officer - - - - **DR. J. J. MACRITCHIE, Halifax.**
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Pathologist - - - - **DR. R. P. SMITH, Halifax.**
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MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

Hall, E. B., Bridgetown.
 Braine, L. B. W., Annapolis Royal.
 Kelley, H. E., Middleton (County & Town).

Murray, R. L., North Sydney.
 Townsend, H. J., Louisburg.
 Gouthro, A. C., Little Bras d'Or Bridge,
 (Co. North Side.)

ANTIGONISH COUNTY

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

COLCHESTER COUNTY

Eaton, F. F., Truro.
 Havey, H. B., Stewiacke.
 Johnston, T. R., Great Village (County)

CAPE BRETON COUNTY

Densmore, F. T., Dominion.
 Morrison, J. C. New Waterford.
 Johnstone, L. W., Sydney Mines
 McNeil, J. R., Glace Bay.
 McLeod, J. K., Sydney.
 O'Neil, F., Sydney (County), South Side.

CUMBERLAND COUNTY

Bliss, G. C. W., Amherst.
 Drury, D., Amherst (County).
 Gilroy, J. R., Oxford.
 Hill, F. L., Parrsboro.
 Eaton, R. B., River Hebert (Joggins).
 Withrow, R. R., Springhill.

Communicable Diseases Reported by the Medical Health Officers
for the month of October, 1935.

County	Chickenpox	Diphtheria	Infantile Paralysis	Influenza	Measles	Mumps	Paratyphoid	Pneumonia	Scarlet Fever	Typhoid Fever	Tbc. Pulmonary	Tbc.-other Forms	V. D. G.	V. D. S.	Whooping Cough	Conjunctivitis	German Measles	Erysipelas	TOTAL
	Annapolis.....	1	13	1	1	..	34
Antigonish.....	1	..	1	..	..	..	..	..	..	..	..	..	2
Cape Breton....	10	8	..	..	..	..	..	..	2	..	..	..	..	..	..	..	..	..	20
Colchester.....	1	1	..	..	1	2	..	..	..	..	..	..	..	..	2	..	..	..	7
Cumberland.....
Digby.....	33	..	1	1	1	1	..	4	..	..	..	..	..	41
Guysboro.....	1	..	1	..	..	1	1	..	..	..	..	4
Halifax City... .	..	4	..	..	..	..	..	..	23	..	3	..	..	..	..	..	..	4	34
Halifax.....
Hants.....
Inverness.....	4	..	..	..	..	4
Kings.....	32	3	..	..	3	1	..	..	1	2	1	1	..	..	..	44
Lunenburg.....	8	..	1	9	..	1	..	4	..	..	..	..	..	23
Pictou.....	2	..	..	..	..	9	..	1	..	3	..	..	..	..	..	15
Queens.....	1	..	5	..	..	..	..	..	..	..	..	..	6
Richmond.....
Shelburne.....	10	..	..	..	..	..	..	..	..	..	..	..	..	10
Victoria.....	15	..	..	..	15
Yarmouth.....	2	..	..	2	2	..	..	..	..	..	..	..	..	6
TOTAL.....	12	13	..	34	4	68	3	6	53	4	6	1	15	2	56	..	..	4	281

Positive cases Tbc. reported by D. M. H. O's. 73.

RETURNS VITAL STATISTICS FOR SEPTEMBER, 1935.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis.....	13	13	20	5	6	0
Antigonish.....	13	13	9	6	11	0
Cape Breton....	167	141	56	52	34	11
Colchester.....	24	19	28	12	4	4
Cumberland.....	36	40	42	13	19	2
Digby.....	22	14	13	5	3	2
Guysboro.....	15	21	18	2	3	1
Halifax.....	155	126	82	52	51	6
Hants.....	23	20	24	11	6	1
Inverness.....	18	15	7	8	11	0
Kings.....	35	28	25	15	17	0
Lunenburg.....	45	33	27	31	20	0
Pictou.....	26	31	27	17	18	2
Queens.....	22	16	14	6	3	3
Richmond.....	14	10	8	11	11	1
Shelburne.....	4	8	9	6	3	2
Victoria.....	10	8	4	1	3	0
Yarmouth.....	23	20	25	11	6	2
TOTAL.....	665	576	438	264	229	37

DIGBY COUNTY

McCleave, J. R., Digby.
 Rice, F. E., Sandy Cove (Mcpy).
 Belliveau, P. E., Meteghan. Clare Mcpy.

GUYSBORO COUNTY

Chisholm, A. N., Port Hawkesbury (Mulgrave).
 Sodero, G. W., Guysboro (Mcpy).
 Moore, E. F., Canso.
 Monaghan, T. T., Sherbrooke (St. Mary's Mcpy).

HALIFAX COUNTY

Almon, W. B., Halifax.
 Forrest, W. D., Halifax (County).
 Glenister, E. I., Dartmouth.

HANTS COUNTY

Bissett, E. E., Windsor.
 MacLellan, R. A., Rawdon Gold Mines (East Hants Mcpy).
 Reid, A. R., Windsor (West Hants Mcpy).
 Shankel, F. R., Windsor (Hantsport).

INVERNESS COUNTY

MacLeod, J. R., Port Hawkesbury
 Chisholm, D. M., Port Hood.
 Chisholm, M., Margaree Harbour (County).
 Ratchford, H. A., Inverness.

KINGS COUNTY

Bishop, B. S., Kentville.
 Bethune, R. O., Berwick (Co. and Town).
 deWitt, C. E. A., Wolfville.

LUNENBURG COUNTY

Marcus, S., Bridgewater (Mcpy).
 Reh fuss, W. N., Bridgewater.
 McKinnon, C. G., Mahone Bay
 Zinck, R. C., Lunenburg.
 Zwicker, D. W. N., Chester (Chester Mcpy).

PICTOU COUNTY

Crummy, C. B., Trenton.
 Blackett, A. E., New Glasgow.
 Chisholm, H. D., Springville, (County).
 MacMillan, J. L. Westville.
 Stramberg, C. W., Trenton.
 Sutherland, R. H., Pictou.
 Benvie, R. M., Stellarton.

QUEENS COUNTY

Ford, T. R., Liverpool (County).
 Hebb, F. J., Liverpool.

RICHMOND COUNTY

Deveau, G. R., Arichat (County).

SHELBURNE COUNTY

Brown, G. W., Clark's Harbour.
 Churchill, L. P., Shelburne.
 Fuller, L. O., Shelburne.
 Banks, H. H., Barrington Passage (Barrington Mcpy).
 Herbin, C. A., Lockeport.

VICTORIA COUNTY

MacMillan, C. L., Baddeck (County).

YARMOUTH COUNTY

Blackadar, R. L., Port Maitland (Mcpy).
 Burton, G. V., Yarmouth.
 O'Brien, W. C., Wedgeport.
 Siddall, A. M., Pubnico (Argyle Mcpy).

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

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

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

Report on Tissues sectioned and examined at the Provincial Pathological Laboratory from October 1st., to November 1st., 1935.

The number of tissues sectioned is 203. In addition to this, 27 tissues were sectioned from 5 autopsies, making 230 in all.

Tumours, malignant	35
Tumours, simple	14
Tumours, suspicious	4
Other conditions	150
Tissues from 5 autopsies	27

OBITUARY

MONTAGUE ALBERT BLOWERS SMITH, 1860-1935.

IN the realm of Medical men some go through life distinguished for their erudition; some for a compelling personality; others for their skill in diagnosis and treatment; a few because like Abu Ben Adam they love their fellowmen. With a judicious mixture of all these, but most prominently of the last, Montague Albert Blowers Smith, graced for over fifty years his chosen profession. Never was physician more attentive to his patients by day or by night, rich or poor. In Nova Scotia any gathering of medical men was incomplete without his presence, and in such gatherings large as was his scientific contribution, to the social success of the meeting it was even greater. He loved his church, but he loved its various activities still more: King's College, Edgemoor, The Church of England Institute, were ever objects of his loyal devotion. He was long an active member of St. George's Society, and attended a meeting of the Nova Scotia Historical Society the evening before his death.

Born in the Garden of the Gulf, a son of Reverend John Smith, he was by inheritance a loyal supporter of the Church of England. Following graduation from King's College, Windsor, he proceeded to Bellevue Hospital Medical School, New York, where he took his degree in medicine. New York at this time had not yet accepted the Listerian teaching, and one of the first problems facing Dr. Smith when he came back to his native land to practise, was to learn the principles of antiseptic technique, which even then had taken firm hold in Nova Scotia. At various times in the years following he returned to his school for inspiration and instruction, and will be long remembered amongst his pupils and conferees as an exponent of the teaching of the justly celebrated Dr. Max Einhorn.

In Halifax he opened an office on Bishop Street, and practising in the town of Dartmouth as well acquired a large clientele. In 1901 he was appointed to the staff of the Victoria General Hospital. For many years he was a teacher of students of Medicine, first in the Halifax Medical College, and later in Dalhousie University. Many of his students have stated that his lectures were amongst the most enjoyable experiences of their lives.

His later years were marked by well merited acts of appreciation on the part of his conferees. He was made an Honorary member of the Nova Scotia Medical Society, and during his fiftieth year in practice was tendered a complimentary banquet by the Halifax Branch of the Nova Scotia Medical Society.

During a long life he maintained the keenest interest in the progress of medicine. When seventy years of age he went to London where he spent weeks of profitable study at Guy's Hospital. He was again a visitor to Great Britain with the Canadian Medical Association on its memorable tour, visiting hospitals and sight-seeing with all the zest of youth.

And as with the Arabian Sage the Call came in the night watches; quietly it was heard and peacefully obeyed. A long life was over. There has passed from the Medical Profession of Nova Scotia, one whose name and works will be long remembered, and who in his life playing many parts, gave to all an everlasting example of interest and devotion.

YOU SAVED HIS LIFE

The day he was carried into your office, bleeding and battered, his deep wounds looked ugly. So you gave him the prophylactic dose of Tetanus Gas-Gangrene Antitoxin—and he recovered.

You gave him Tetanus Gas-Gangrene Antitoxin because you knew that his wounds very likely harbored the dreaded anaerobic organisms—tetanus, perfringens, vibrión septique. You knew that he, like all your patients with contaminated wounds, was a potential victim of tetanus or gas-gangrene.

The frequent incidence of the gas-producing bacilli, *B. perfringens* (*B. Welchii*) and *B. Vibrión septique*, in anaerobic infections makes it advisable to protect against both of these organisms, as well as against *B. tetani*. Clinical evidence indicates that the remaining anaerobic organisms are a much less frequent cause of infection.

The physician desires no compromise with safety. Protection against these three potential factors in anaerobic infections is afforded by Tetanus Gas-Gangrene Antitoxin (Combined), Refined and Concentrated, Parke, Davis & Co.

FOR PROPHYLAXIS

Tetanus Gas-Gangrene Antitoxin
(Combined)
Prophylactic (Refined and
Concentrated).

FOR TREATMENT

Tetanus Antitoxin and
Gas-Gangrene Antitoxin (Combined)
Therapeutic (Refined and
Concentrated).



PARKE, DAVIS & COMPANY
WALKERVILLE, ONTARIO

AGOMENSIN "CIBA"

The Hydrosoluble Ovarian Substance, which provokes hyperaemia of the female sexual organs, stimulates ovarian function and *activates menstruation.*



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The Liposoluble Ovarian Hormones standardized by the Allen and Doisy and growth test, indicated in cases where there is *need for the ovarian hormones*, especially in cases of structural abnormality.



PROKLIMAN "CIBA"

An association of Ovarian Hormones with sedative, decongesting and laxative substances and an agent regulating the cardiovascular system, for the rational treatment of *climacteric disturbances.*



CIBA COMPANY LIMITED - MONTREAL.

Personal Interest Notes

DR. and Mrs. B. W. Skinner, Mahone Bay, have returned from a three week's trip to places of interest in the Canadian West, including Lake Louise, Banff, Calgary, Regina and Winnipeg.

Congratulations to Dr. and Mrs. C. A. Herbin, of Lockeport, on the birth of a son on October 4th.

Dr. W. J. MacDonald, of Truro, has returned home from a visit to Boston.

Dr. Hugh MacKinnon, of Berwick, who has completed a year's post-graduate course in London, England, has returned home.

Dr. J. G. MacDougall, Halifax, was re-elected President of the Provincial Medical Board of Nova Scotia at the annual dinner meeting held at the Lord Nelson Hotel November 4th. Approximately fifteen board members from all parts of the Province were present. Other officers elected were: Registrar—Dr. H. L. Scammell, Halifax. Executive—Dr. J. J. Cameron, Antigonish; Dr. H. K. MacDonald, Halifax; Dr. M. G. Burris, Dartmouth. Visiting Committee—Dr. J. B. Reid, Truro; Dr. J. A. Sponagle, Middleton. Auditors—Dr. A. B. Campbell, Bear River; Dr. J. B. Reid, Truro. Following the meeting a dinner given by Dr. MacDougall in honour of the visiting members was held in the private dining-room.

The marriage took place very quietly at Port Dufferin on Saturday afternoon, November 2nd, of Miss Helen Scott, daughter of Mr. and Mrs. George E. Scott, Guysboro, and Dr. Gerald P. Tanton, son of Mr. and Mrs. J. P. Tanton, of Summerside, P. E. I. Dr. Tanton graduated from Dalhousie University last spring and has recently taken up practice with Dr. Duncan MacMillan at Sheet Harbour.

Dr. Gordon M. Bruce, of Shelburne, was one of the newly admitted Fellows of the American College of Surgeons.

Dr. and Mrs. L. J. Lovett, of Bear River, spent the latter part of October at their hunting camp at White Sands Lake.

Dr. A. F. Miller, Medical Superintendent of the Nova Scotia Sanatorium, Kentville, recently gave an address to the Eastern Counties Medical Society on the "Clinical and X-ray Diagnosis of Tuberculosis".

Dr. D. W. N. Zwicker, of Chester, was a patient at the hospital in Halifax during October receiving medical treatment.

Dr. and Mrs. J. Fabian Bates have returned to Glace Bay from their wedding trip through Nova Scotia and the New England States.

Dr. J. V. Graham, of Halifax, has returned from San Francisco where he attended the Clinical Congress of the American College of Surgeons. Dr. Graham was admitted to Fellowship in the College at that meeting, for which recognition of surgical ability the BULLETIN offers its hearty congratulations.



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Survey of Tuberculosis at Glace Bay.

The tuberculin testing, part of the survey carried out by the Department of Preventive Medicine, Dalhousie University, in co-operation with the Provincial Government at Glace Bay and its environments, has now been completed. In all there were 1700 given the tuberculin test. The Committee from the Canadian Legion has been a great help in this connection. They supplied cars for the transportation of children to and from the hospital and were in great part responsible for popularizing the survey.

Dr. E. DuVernet, of Digby, spent a few days recently in Saint John, N. B.

Dr. Freeman P. Smith of Mill Village Passes 86th Milestone.

On September 12th, Dr. Freeman Park Smith, one of the most respected physicians of Queens County, celebrated the 86th anniversary of his birth. Dr. Freeman Smith was born at South Brookfield, Queens County, N. S., on September 12th, 1849, in the first wooden house erected in North Queens. The old homestead is at present occupied by his brother, Primrose Smith.

Dr. Smith received his early education in the little school house at South Brookfield. His advanced education was taken at Acadia University, and at Bowdoin College of Brunswick, Maine. It was not so easy for Dr. Smith to get this advanced education as many of the present generation find it. He was many years obtaining it as between terms it was necessary for him to work at lumbering and river driving to get the necessary funds. However, with the same determination and spirit he has shown all his life, he stuck with it, and finally received his Medical Degree from Bowdoin College in 1881. He has been practising medicine ever since. His first practice was at Barrington Passage where he stopped for eleven years, then he moved to Caledonia, and from Caledonia to Mill Village. The Doctor is still active and responds even at his advanced age to calls at all hours of the day and night. At the present time, after fifty-five years of faithful service he is one of the oldest practitioners in the Province. For the past four or five years he has been an honorary member of the Medical Society of Nova Scotia, and he is also a life member of the Rossignol Chapter, No. 6, R.A.M.

The BULLETIN takes this occasion to congratulate Dr. Smith on his birthday and trusts that he may carry on the good work for many years to come.

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In a lecture on human nutrition in which it was stated (Brit. Med. Journ., March 23rd, 1935, p. 571) that right nutrition, especially in early life, may profoundly affect the well-being of the individual, it was pointed out that there is usually some complexity in the causation of nutritional failures, different vitamins influencing different processes; for example, in the complex growth of a tooth Vitamin A plays a part as well as Vitamin D, or in the causation of beriberi Vitamin A deficiency is concerned as well as Vitamin B₁.

The trend of modern medicine towards ensuring nutritional balance was indicated in the suggestion that it is a sound policy to encourage the practice of giving extra dietary supplies of vitamins.

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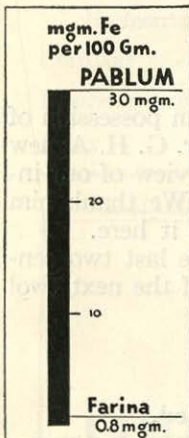
Aged	1728	Loofnefs	10
Ague	4	Lunatick	22
Apoplexy	76	Malignant Fever	2
Afthma	15	Meafles	426
Bleeding	11	Mortification	46
Bloody-flux	6	Pain in the fide	1
Burften	5	Palfe	23
Calenture	1	Plague in the Guts	1
Cancer	77	Plurifie	47
Canker	10	Purples	16
Chicken-Pox	1	Quinie	14
Childbed	247	Rafh	7
Chin-Cough	3	Rheumatifm	28
Chrifoms	57	Rickets	211
Colick	93	Rifing of the Lights	72
Confumption	2796	Rupture	11
Convulfion	5902	St. Anthony's Fire	5
Cough	3	Scarlet-Fever	1
Cramp	1	Scurvy	8
Cut of the Stone	2	Small-Pox	1687
Diabetes	1	Sores & Uicers	36
Diftracted	1	Spleen	4
Dropfie	783	Spotted-Fever	62
Evil	68	Stone	43
Fever	2738	Stone-Colick	1
Fiftula	30	Stoppage in the Stomach	272
Flux	9	Strangury	5
French Pox	39	Strongullion	3
Gangrene	4	Suddenly	73
Gout	17	Suffocation of the Blood	1
Grief	9	Surfeit	36
Griping in the Guts	768	Teeth	1282
Head-mould-fhot	13	Thrufh	59
Hectick-Fever	1	Tiffick	324
Hooping-Cough	3	Twifting of the Guts	8
Jaundies	85	Tympany	11
Impofthume	61	Vapours	4
Infants	35	Vomiting	28
Inflammation	1	Vomiting and Loofenefes	1
Leprofie	1	Water in the Head	13
Lethargy	9	Wind	1
Livergrown	4		

For bland diet therapy, especially ULCER cases - PABLUM

FAR too often the bland diet prescribed for gastric ulcer, colitis, and similar gastro-intestinal disorders is a deficient diet. An analysis made by Troutt of ulcer diets used by 6 leading hospitals in different sections of the country showed them to be "well below the Sherman standard of 15 milligrams" in iron and low in the water-soluble vitamins.¹ "Vitamin B would appear to be represented at a maintenance level in most cases," writes Troutt, "but the possible relation of vitamin B to gastro-intestinal function and appetite should make one pause before accepting a low standard."

Low in Fiber — High in Iron

Pablum is the only food rich in a wide variety of the accessory food factors that can be fed over long periods of time without danger of gastro-intestinal irritation. Its fiber content is only 0.9%. Yet Pablum contains 37 times more iron than farina and is an excellent source (+ + +) of vitamins B and G, in which farina is deficient. Supplying 8½ mgms. iron per ounce, Pablum is 8 times richer than spinach in iron.



Although Pablum has a low fiber content it is 37 times richer than farina in iron and in calcium, 4 times richer in phosphorus, and 4½ times richer in copper.

Rich in Vitamin B

The high vitamin B content of Pablum assumes new importance in light of recent laboratory studies showing that avitaminosis B predisposes to certain gastro-intestinal disorders. Apropos of this, Cowgill says, "Gastric ulcer is another disorder which can conceivably be related to vitamin B deficiency. Insofar as the treatment of this condition usually involves a marked restriction of diet the occurrence of at least a moderate shortage of this vitamin is by no means unlikely. Obviously the length of the period of dietary restriction is an important determining factor. Dalldorf and Kellogg (1931) observed in rats subsisting on carefully controlled diets that the incidence of gastric ulcer was greatly increased in vitamin B deficiency. Observations of this type merit serious consideration."²

Requiring no further cooking, Pablum is especially valuable during the healing stage of ulcer when the patient is back at work but still requires frequent meals. Pablum can be prepared quickly and conveniently at the office or shop simply by adding milk or cream and salt and sugar to taste. Pablum has the added advantage that it can be prepared in many varied ways—in muffins, mush, puddings, junket, etc. Further, Pablum is so thoroughly cooked that its cereal-starch has been shown to be more quickly digested than that of farina, oatmeal, cornmeal, or whole wheat cooked four hours in a double boiler (studies *in vitro* by Ross and Burrill).

Pablum consists of wheatmeal, oatmeal, cornmeal, wheat embryo, alfalfa, yeast, beef bone, iron salt and sodium chloride.

¹⁻² Bibliography on request.

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CASUALTIES

ABowive.....	120	Killed Accidentally.....	50
Bruified.....	5	Murder'd.....	15
Burnt.....	3	Overlaid.....	53
Died by Misfortune.....	1	Planet-ftruck.....	1
Drowned.....	63	Self-Murder'd.....	28
Executed.....	6	Smother'd.....	1
Extremity of Cold.....	1	Stabbed.....	1
Found Dead.....	27	Stillborn.....	539
Frighred.....	1	Suffocated.....	1

Chriftned	{	Males.....	8239	Buried	{	Males.....	10604
		Females.....	7623			Females.....	10687
		In all.....	15862			In all.....	21291

Decreafed in the Burials this Year.... 309

The above historical gem is a copy of an old report now in possession of the McKellan General Hospital at Fort Williams, Ontario. Dr. G. H. Agnew showed us his copy when he was last in this Province, and in view of our interest, promised to send a duplicate upon his return home. We thank him for having kept his promise and for permission to reproduce it here.

What a commentary upon the advance of medicine in the last two centuries! What occasion for speculation upon the possibilities of the next two!

Use of Chlorine to End Dishwater Menace Urged.

Diseases Such as Pneumonia, Tuberculosis, 'Flu and Scarlet Fever Spread by Cutlery and Chinaware.

Milwaukee.—Put a little chlorine in the dishwater to cut down the respiratory diseases which cause 30 to 45 per cent. of North American deaths.

A new Government experiment showing this was reported to the American Public Health Association here Monday by James G. Cumming, M.D., chief of the Bureau of Preventable Diseases, Department of Health, Washington.

The dishwater menace applies alike to homes and restaurants. Experiments reported were made only in restaurants.

The diseases, spread by knives, forks, spoons and plates, include pneumonia, tuberculosis, influenza, scarlet fever, measles and the respiratory troubles the public thinks of as travelling mostly through the air.

In 46 restaurants, including both better and poorer types, the examiners found an average of 50,000 to 100,000 bacteria per spoon, after washing.

When chlorine was used properly in the washing and rinsing, spoons showed from two bacteria to none.—*Bridgetown Monitor*, October 16.