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Principles of Diagnosis and Treatment in Diseases Due to Allergy*

Two Illustrative Cases of Asthma

RICHARD A. KERN, M.D.,

Professor of Clinical Medicine, University of Pennsylvania, Philadelphia.

FIRST I wish to call to your attention certain major principles in the diagnosis and treatment of diseases due to allergy. Then I shall present two patients with bronchial asthma in whose story and findings there are a number of significant, interesting and instructive points.

The prime requisite for the recognition of an allergic disease is a clinical awareness on the part of the practitioner, not only that allergy exists, but that it is extremely common. Allergy, after all, is the heritage of one in every seven of us. One in every seven will manifest some form or other of allergy, and often several forms from time to time throughout life. The defect which the allergic carries from the cradle to the grave is not asthma, not sensitivity to ragweed, but the ability to become rather easily sensitized in almost any part of his anatomy to almost anything in his environment. Therefore the allergic's medical story, all through his life and irrespective of what diseases he may acquire, will always be tintured with the manifestations of hypersensitiveness.

To recognize a disease as of allergic origin is at times very easy, if the presenting condition is one that is generally known to be allergic. When a patient tells you, "I have hay fever", you promptly think of pollen allergy; if he says "I have asthma", you at once make a mental note that allergy must be considered as one of the possible causes of this patient's dyspnoea.

But, in the more obscure types of allergy, and in those conditions which might be due, not only to allergy but to a number of other causes, we must be ever on the alert for the allergy possibility. Take for example, headache. Headache may arise from a thousand and one causes, but we have learned, however, to think of certain things as being rather common causes of headache: eye-strain, sinus disease, constipation, and others. We must now enroll allergy among the commoner causes of headache, to be looked for routinely in such cases. This means that you shall inquire of your patient whether he or any member of his family has ever had certain obviously allergic conditions: asthma, hay fever, urticaria, food idiosyncrasy, and if the answer is "yes", then allergy looms up as a possible cause of symptoms.

However, if you are to recognize allergy in its unusual and therefore unexpected manifestations, that is, when the chief complaint of the patient may not even remotely suggest allergy (as in the patients with bladder pain and with hematuria that I described to you yesterday), then you must make it a routine to inquire about allergy in personal and in family history, no matter what your patient complains of, be it falling of the hair or falling of the arches. Not one of you, in taking a medical history fails to ask: "Do you cough? Do you vomit? Has anyone in your family had tuberculosis? diabetes? cancer?"

*Presented at the Dalhousie University Refresher Course, Halifax, Nova Scotia, August 31, 1937.

It will take only a minute longer to ask "Do you sneeze? Do you wheeze? Do you get hives? And what of your family?" If you ask routinely about allergy, you will strike oil oftener with these questions than with any others. They will give you valuable information about your patient and his background. After all, you are not treating tuberculosis or duodenal ulcer or kidney stone, but a whole patient and you wish to know all you can about his disease potentialities.

When your suspicions have been directed frankly toward allergy in a given case, then comes the detailed history in that direction. Here, unfortunately, a great many of us, and especially our students, are handicapped in that we haven't enough specialized knowledge about the possibilities of clinical allergy to ask the proper questions. The allergy history, particularly in the case of asthma, is the most difficult to elicit in the whole field of medicine, going, as it must, into every detail of the patient's activities, work, play, habits and environment. Our patients today will illustrate some of the more important points.

The physical examination of the allergic patient must be no less careful and systematic than in other patients. Just because the patient has an obviously allergic disease does not mean he cannot also be suffering from any of the ills that flesh is heir to. There is at this minute a patient on my service at home who was sent to me because of asthma. He had asthma, to be sure, but the chief cause of his dyspnoea was a mediastinal tumor that had been overlooked by his family doctor. The successful removal of the tumor relieved the patient's major complaint. It must be remembered that a number of conditions may simulate asthma, at times to a remarkable degree: foreign bodies in the bronchial tree, bronchial stenosis due to stricture or to benign or malignant neoplasm, pressure on trachea or main-stem bronchi by various kinds of mediastinal masses. Not all is asthma that wheezes.

Having learned that your patient is allergic, your next problem is to find out to what he may be hypersensitive. A careful history is of course of much value in this direction, but the most useful procedure is skin testing. This, for economic reasons, is often out of the realm of the general practitioner, because of the large number of test substances necessary for complete testing, a number that is constantly increasing. I remember I had 27 test substances when I started skin testing in 1916. The last time we counted those available in our clinic there were over 500, and we have the necessary equipment with which to make test extracts from any conceivable substance. However, the practitioner can do the testing in certain conditions in which only a limited number of substances come into play, as, for instance, in most cases of hay fever. How to test, while it can be described in lectures or in books, is best learned by watching the actual procedure.

The results of skin tests are at times extremely confusing to the uninitiated. In earlier years allergists attempted to define in terms of measurement and description what is a positive skin test. After 21 years of skin testing I am still unable to say exactly what is a positive reaction. I can say, however, what is a negative skin test: the complete lack of a reaction, or a reaction at the test site that is no greater than, and not different from the reaction at a control site. The latter part of the definition is meant for the patient whose skin reacts by redness and swelling to any mechanical stimulus (e.g., dermatographia). Any test reaction that deviates from the negative is not negative and therefore, for practical purposes, must be considered positive.

The crucial point of the whole skin testing procedure is this: Just because a certain substance reacts on the patient's skin, one is not justified in assuming that the substance has any relation to the patient's symptoms. He may suffer no symptoms from things which give strong reactions, and he may be markedly affected by things which give negative skin tests. The skin reaction is simply a guide for the next procedure: the clinical test. This is, to see if avoidance of the reacting substance will give relief from symptoms, and then to see if exposure to the reacting substance will produce symptoms. Skin tests, you see, are far from infallible. Yet in spite of their limitations, they are still the best method of approach, they still offer a higher average of success than any other procedure in the diagnosis of allergy.

The last principle which I wish to emphasize from the standpoint of diagnosis is this: The commonest cause for failure in the management of allergic states is *incomplete diagnosis*, the failure to find all the substances to which an individual is hypersensitive, the failure to find all the complicating factors in that particular case. The allergic patient is being bitten by a buzz-saw. If you break out only some of the teeth of the saw, the remaining teeth will still bite him every time they come 'round. For example, let me warn you against reasoning and acting in the following way: "The patient reacts, among other things, to feathers. Let us try taking him off feathers for a time and see what happens." The patient accordingly sleeps on something else and gets rapidly no better. You then say, "Well, feathers aren't a cause of his trouble, so let him sleep on feathers and we shall try something else." That reasoning is fallacious. You have no right to assume on such evidence that feathers are not a cause of trouble: the evidence simply proves that feathers could not be the *only* cause. All possible leads must be followed concurrently; all reacting substances must be avoided at the same time; no one suspicious factor should be left out of consideration. Obviously then a *complete* diagnosis of causes is the prime and absolute essential.

Turning now to *treatment*, our first thought is naturally directed toward prophylaxis. Patients become hypersensitive primarily because they have inherited the ability to be easily sensitized. We haven't reached the state on this side of the Atlantic that we would forbid the propagation of allergics, and it is probably wise that we can't forbid it, for the allergics are really pretty goot citizens. There is good evidence to show that physically they get along very well, being less vulnerable than average to infectious diseases. Nor does their allergic disease as a rule shorten life or greatly interfere with occupation. There is evidence, too, that mentally they are good material, being apparently above average in intelligence. One might, however, wish to discourage two obviously and markedly allergic individuals from mating, since 75 per cent of the offspring of such a union are found to be allergic.

As I pointed out yesterday, the degree of exposure to possible sensitizing substances is an important factor in the actual development of sensitivity. It is along this line that we can give our patients good and helpful advice. The individual of allergic heredity, especially if he has already shown some personal evidence of sensitivity, should carefully avoid any unnecessary or excessive exposure to certain things, and especially to substances of animal epidermal origin, since these are more likely to induce inhalent sensitivity. Thus the allergic child should use cotton pillow and mattress, rather than those stuffed with feathers and horse hair. Do not give him wooly or feather-stuffed toys to play or sleep with; do not give him a dog until he is 10 or 12 years old, when

he is less apt to hug and kiss the beast or even take it to bed with him. Then when he finally gets a dog it should preferably be short-haired and not large. Theoretically, I suppose these conditions would best be met by a Mexican Hairless.

So-called specific treatment in allergic disease concerns itself with the specific substances to which an individual is sensitive. I can only refer to a few basic rules. The first is this: avoidance of that to which the patient is sensitive gives the best results. For example, if the hay fever patient can afford to come to Nova Scotia during the ragweed season, he will have 100 per cent relief. But even though complete avoidance be not possible, much is to be gained by partial avoidance of that to which the patient is sensitive. The quantitative element must not be overlooked: a patient may tolerate fairly well a certain amount of ragweed pollen but will be completely floored by twice that amount. So he should keep his bedroom windows closed as much as possible, we must resort to the second best procedure (with emphasis on the *second*), which is to try to increase the patient's tolerance by graduated increasing exposure to the antigen: for example, pollen extract by injection before the pollen season starts or feeding the reacting food, at first in amounts so tiny as not to cause symptoms.

Another fundamental rule in treatment of allergic disease is: treat *all* the factors involved in a given case. Equally important with incomplete diagnosis is incomplete treatment as the commonest cause for failure in the management of allergic patients: incomplete avoidance when complete avoidance is possible; incompletely carried-out desensitization programs; incomplete search for and treatment of complicating infections, such as sinus disease in asthma.

The chain of events which constitutes the allergic phenomenon is an exceedingly complex affair, and we know comparatively little about it. Observation and experience, however, have taught us that this chain of events can at times be interrupted, that is, the allergic manifestations can be stopped and the patient rendered symptom-free for a time, by a considerable number of widely different procedures. These for convenience may be referred to under the term non-specific treatment. All the forms of protein shock therapy have been applied, and often successfully, in treating the allergic patient. This practice has grown out of the much older clinical observation that an acute intercurrent febrile infection often has a remarkable curative effect on asthma as well as on many other chronic diseases, especially infections. You all know the brilliant results that have been obtained in the treatment of paresis since the introduction, in 1918, by von Jauregg of inoculation malaria. It may interest you to know that a hundred years before, in 1818, Nathaniel Chapman, then Professor of the Theory and Practice of Physic in the University of Pennsylvania, said in his lectures that on the European continent it was customary for physicians to send patients with such diseases as asthma or arthritis to the Mediterranean littoral, that there they might contract intermittent fever which would cure the original disease and then could be cured by quinine. At times the administration of large doses of dilute hydrochloric acid has successfully checked allergic symptoms.

In the use of these non-specific measures the physician should bear in mind two important points. Non-specific measures are less likely to help, and their results, even when favorable, are less lasting than is the case with specific measures. Their use should therefore not be considered until specific factors have been sought for and ruled out.

The second point in regard to the non-specific factors that must be remembered is: do not be misled into misinterpreting the results of a non-specific therapeutic measure by drawing wrong conclusions in believing a non-specific agent to be actually specific. So, just because injecting "X", gives relief of symptoms, you are not satisfied that symptoms are due to a lack of "X", or even to a sensitivity to "X". Yet within a year I have been assured that because injections of an extract of spleen gave good results in asthmatics, hypo. function of the spleen must therefore be the cause of asthma. At the very same time another person was claiming he could cure asthma by splenectomy. Because by giving hydrochloric acid he could at times relieve allergic symptoms, Beckman assumed that allergy was fundamentally a condition due to alkalosis. Yet if you derange in some way the patient's chemical state by giving large doses of alkali (sodium bicarbonate), you can just as often get symptomatic relief.

Turning now to the matter of the treatment of the actual attack, the most useful thing is adrenalin. It has a certain diagnostic value, for the more quickly it acts, the more likely is the case in hand to be of allergic etiology. In the use of adrenalin it is extremely important to remember one thing. You can put out a fire in a waste basket by spitting on it, but when the fire has spread to the rest of the room it will take many buckets of water to do the work. You can stop an asthmatic paroxysm at its beginning with a very little adrenalin, but if you wait until the paroxysm is well established, it takes much more. Therefore teach the patient to give himself the adrenalin and tell him to use it as soon as his attack starts. If he has to wait for you to come and give the injection it may be some hours before treatment is started. Two or 3 minims are the usual dose, 5 at the most. Give these small doses early, and as often as needed—every 5 minutes if you wish. If you give small doses early, not only will you stop the attack much more promptly, but you will avoid those undesirable side effects: sharp blood pressure rise, trembling, palpitation, and the like, which larger doses of adrenalin entail, and which make so many patients gun-shy of adrenalin, causing them to have recourse to morphine with its obvious dangers. The action of adrenalin is often enhanced by the addition of pituitrin. (The proprietary preparation, Asthmolysin, is adrenalin and pituitrin).

More recently it has been possible to administer adrenalin by atomizer, using a 1.100 solution. The secret of its successful use is the atomizer, which must get the watery solution into an unusually fine state of division, so that it shall reach far down into the bronchial tree. Three or four deep breaths of the vapor are usually enough. The patient must of course be warned never to use 1.100 adrenalin hypodermatically.

At this point let me warn you against the use of the various asthma powders (stramonium and saltpetre) which patients burn and inhale the smoke. While they often give relief during the acute attack, they aggravate the existing bronchitis and the patients are actually made worse in the long run by their use.

Ephedrin is of course very useful. It will control mild attacks rather well. Its greatest usefulness (and this is true of all drugs other than adrenalin and pituitrin) lies in its ability to prevent the onset of attacks. For this purpose it should be given at regular intervals: for instance, 2 or 3 times a day. Iodide has its chief value in that it loosens bronchial secretion, so that the patient can get up in one or two easy coughs what might otherwise require a prolonged paroxysm of coughing. Calcium may or may not be helpful. In the urticarias I feel it has been of value.

Let me emphasize again that these non-specific measures simply interrupt the allergic mechanism in one way or another, and this interruption is usually temporary, even little more than momentary, as in the case of adrenalin. Only rarely is their effect prolonged or even permanent. The best hope lies in the finding of the specific cause.

Now to turn to our patients.

Case 1. This young lady, Miss M. F., 22 years old, white, a native of this province, was admitted to this hospital on August 18, 1937, with chief complaints of asthma and hay fever. Her story begins with whooping cough early in the summer of 1930, following this she had her first respiratory symptoms. These consisted of an uncomfortable feeling in the nose and a heaviness and feeling of oppression in the chest. The latter was undoubtedly the beginning of a mild asthma, and the nasal symptoms were probably the start of her hay fever. With the end of that summer her troubles cleared up, and except for an occasional "cold", she remained well until the following spring, 1931, when she had pleurisy with effusion that required tapping. Since that time she has had frank and at times severe asthma off and on. Between asthmatic spells she has what she calls hay fever: that is, paroxysms of sneezing, itching of eyes and nose, and watery nasal discharge. These symptoms have been worse in mid-summer, but are present in milder degree at other seasons as well. This summer there occurred the usual increase of trouble which finally forced her to come to the hospital two weeks ago.

The record tells us that her past history, except for the above mentioned attack of pleurisy, is not significant, and that her father, mother and four brothers are living and well.

Physical examination on admission disclosed no positive findings other than numerous typical wheezing rales in both lungs.

A blood count showed 7 per cent of eosinophils, and, on repetition, 15 per cent.

A chest x-ray was made and disclosed no signs of pulmonary tuberculosis. At this point let me emphasize that this is the chief purpose that a lung x-ray can serve in the asthmatic, and this examination should always be made when there is a suspicion of tuberculosis, as in this patient with her history of pleurisy with effusion. The asthmatic is just as liable to tuberculosis as the non-asthmatic, and the physical signs of asthma are such as to mask a tuberculosis lesion. But in asthma itself, the lung x-ray is of very little help. Films in one hundred asthmatics will show one hundred similar findings: increased hilus shadows; increased linear markings, especially in the lower lobes; and usually an alleged state of emphysema. Not infrequently the roentgenologist is led to interpret these findings as evidence of bronchiectasis. Almost invariably he is wrong, as can be shown by bronchoscopy and bronchography with lipiodol. Not infrequently he is wrong when he diagnoses emphysema, that is if the film is made in the midst of the asthmatic paroxysm.

The next examination made in our patient was an x-ray of the sinuses and these were found normal. Sinus x-ray should be routinely made in all asthmatics because of the very high incidence of a complicating sinusitis in these patients.

Next there was performed on our patient an extensive series of skin tests. She was found to react positively to a number of substances: certain bacterial proteins gave the most marked reaction; lesser reactions were obtained to feathers, dust and several foods.

Now, how shall we evaluate the information thus far available?

It seems clear that we are dealing with bronchial asthma, undoubtedly due to a multiplicity of sensitivity and without any major complicating factors such as infection. But more information is needed as to the details of her sensitivity. This information should first be sought for by getting additional history. I therefore questioned her yesterday afternoon and here are some of the things I learned.

She has a strongly positive family history of allergic disease. Her father has had asthma off and on for about 8 years, usually in connection with colds. (This does not necessarily mean that infection alone is responsible for his asthma. Thus he may well be sensitive to feathers or horse hair, but not sufficiently so that his respiratory mucosa is vulnerable when in a normal state. But when the mucosa is rendered vulnerable by infection, then the feathers and horse hair can be important causes of aggravating his asthma. This sort of thing is encountered in some hay fever patients: they have symptoms only in the pollen season, yet their symptoms are due not only to major sensitivity to pollen but also to minor sensitivity to other things—dust, feathers, food—which is not able to provoke trouble save only in the pollen season when the nasal mucosa is rendered more vulnerable. The important point from the practical side in such cases is that treatment of such cases will fail unless the minor as well as the major sensitivities are recognized and taken into account).

Her brother, now aged 29, has had asthma from time to time since he had scarlet fever at 11, and every summer he gets hay fever in late August and September. Her mother apparently is subject to migraine. You see, our patient has come by her allergy honestly.

Nor did her own allergic story begin in 1930 when she was 15. It began in infancy, with an eczema that lasted through the first two or three years of her life. Furthermore, that eczema has recurred from time to time: In recent years it has followed each bout of asthma: eczema and asthma alternate with each other as expressions of sensitivity. We are now safe in surmising that she began by being sensitive to foods and that food sensitivity still exists. In addition to playing an etiologic role in her eczema and her asthma, it may account for some digestive disturbances: so she tells me that certain foods regularly cause flatulence and epigastric distress.

Here let me point out a possible diagnostic pit-fall. Make sure whether it is a *specific food* or just a *meal* which according to the patient aggravates the asthma. In any asthmatic the eating of a hearty meal, or filling the stomach with something very cold—ice cream, for example—can at times precipitate trouble. Asthmatics should therefore never eat the main meal in the evening nor eat anything very cold before going to bed.

Here is some more information that points to respiratory allergy: an allergic rhinitis. Of course, you don't ask the patient: "Have you allergic rhinitis?" That would elicit only a blank stare. You ask: "When you sneeze, do you sneeze once or twice, or do you sneeze at least half a dozen times in a row?" The normal person is entitled to one, two or at most three consecutive sneezes: six in a row is undoubtedly abnormal and is just as likely to be allergic as the most obvious case of asthma. Yet so little bothered is the patient by this sneezing, that no significance is attached to it by the patient or, what is worse, by the doctor. This woman since she can remember has habitually sneezed six or more times in a row at all seasons of the year.

The time of day in which symptoms occur may be informative. Our patient does most of her sneezing in the early morning on awakening. It is highly probable that this is due to something with which she is in contact at that time: bedding, house dust.

The importance of season in the occurrence of symptoms is obvious. Hay fever offers a good example. Here the physician must not be satisfied with such vague terms as "spring" or "fall", but should get accurate dates whenever possible, to see if they fit the pollinating time of certain plants, or perhaps the seasonal occurrence of certain foods or occupations.

And now comes an extremely important point which this patient illustrates beautifully: What is the relation of symptoms to the location of the patient? Three years ago she went to Massachusetts to visit a brother. A few days after she got there her symptoms stopped and she remained perfectly well during the six months of her stay. When she came back to her home in Nova Scotia, the asthma returned in the very first night. There is the essence of this case. It is certain proof that infection had no real part in causing her trouble, for the infection she would have carried with her. When she went to Massachusetts she got away from the major cause of her trouble here in Nova Scotia.

Was it climate that made this difference? No. And how do I know that? She was admitted to the hospital on the 18th of August because for several days she had had asthma so severe that adrenalin afforded little or no relief. Yet within two days she became free of symptoms and has so remained to this minute. Climate wasn't responsible for that. It was getting away from something within the four walls of her home. What that is, I don't know. It may be the family cat—there was no cat in the house in which she stayed in Massachusetts. It may be her feather pillow (she has a woolen one here in the hospital). It very probably is the dust in her home. These are the major lines along which the further study and treatment of this patient hold the greatest promise of success.

Let us now turn to our second patient whose story illustrates some very interesting points.

Case II. The hospital record tells us that Mrs. A. M., aged 50, was admitted on August 14, 1937, because of severe asthma. Her first attack of asthma had occurred on the afternoon of July 12, 1936, while she was on a picnic. In her opinion it was caused by a sudden gust of wind that "stirred up the grass pollen". The attack was severe and lasted for two weeks. During the succeeding fall, winter and spring she was troubled off and on with asthma, especially at night. She was, however, not incapacitated. In July of this year the asthma became much more severe, frequently requiring the use of adrenalin injections, and finally resulting in her entrance into the hospital.

The past medical and family history, we are told, is not remarkable. She has been troubled with occasional sore throats and rather frequent head colds. Her father died of carcinoma of the prostate and her mother is living and well.

Physical examination on admission showed the usual chest findings of a full-blown asthmatic attack. The blood pressure was normal and the heart negative. Examination of the nose showed numerous mucous polyps that practically blocked both nostrils, and both antra were opaque to transillumination.

The blood count revealed a slight anemia and an eosinophile count of 8 per cent. X-ray studies showed hazy antra and in the lungs the usual increased hilus shadows and so-called emphysema.

What leads and suggestions can we glean from these data? The sharp onset of asthma on July 12, 1936, and the exacerbation of symptoms this July undoubtedly point to pollen, probably grass pollen, as a factor in this case. But pollen is certainly not the only factor, else her symptoms would not have persisted throughout the winter.

The finding of nasal polyps is extremely significant, and in my opinion, practically conclusive proof, not only of nasal allergy, but of *nasal allergy that has lasted for a long time*. Dr. Schenck and I¹ became convinced of this several years ago. Without going fully into our reasons for this view, let me at least refute the commonest alleged cause for mucous polyps, paranasal sinus infection. If sinus infection were a cause of polyps, then polyps should be common in the presence of sinusitis. Yet in 64 consecutive cases of bronchiectasis, a condition in which sinus infection is always present and in a higher degree of involvement than in any other condition—usually a so-called pansinusitis, polyps were found in only a single patient and he had had asthma. Asthmatics, on the other hand, irrespective of sinus infection, will show nasal polyps in nearly a third of the cases.

I therefore questioned our patient along these lines and here is what I learned. For many years she has sneezed easily and often. As the sneezing spells became more marked and were attended by more and more watery secretion, she considered them "colds". But it is significant that these so-called "colds" were just as frequent in summer, when infection is not common, as they were in winter. In the course of time, nasal obstruction became more and more constant and severe. Finally she sought medical aid in 1932, when polyps were found and were for the first time removed. Temporarily she breathed more easily, but the sneezing and the "colds" continued as before, and it wasn't long before she had another crop of polyps. They were again removed and again recurred. The polypectomy performed last week was the fifth since 1932. And the polyps will recur until we discover the things to which she is sensitive: the things which are responsible for her "colds", her polyps and her asthma.

She gives additional history that fits in with an allergic etiology of her present trouble. Both her grandparents had asthma and for years. The patient herself has known for at least 5 years that she has an idiosyncrasy for aspirin. Each time she takes it she "chokes up".

Almost every year there is reported the case of some asthmatic who heard from his friends that aspirin can relieve an asthmatic attack (and often it does). He takes one tablet and soon finds himself very much worse, because of his unsuspected idiosyncrasy. The patient, however, thinks he simply has a much severer attack than usual, which calls for another dose of aspirin. He takes the second dose and within the hour he dies. When a patient tells you that he has a marked drug idiosyncrasy, please take his word for it and don't make any foolish experiments on your own.

In this patient, as in the former one, location plays a part in the symptoms. You see, she is at the moment quite comfortable, and examination of her chest today shows nothing abnormal. If you ask her, why she has improved, she says the improvement is due to the polypectomy. The record, however, shows that for a week before her admission on August 14th, she had been in

very severe asthma, that the day after admission she had begun definitely to improve and that by August 17th, she was free of asthma. The first polyps were not removed until three days later, August 20th. It is clear in this patient as in the last that coming to the hospital took her away from something in her home—house dust? feathers? molds? pets?—to which she is highly sensitive.

But in addition to allergic factors, there is probably yet another important one which must be considered in the light of her story: *infection*. Infection is something which she does not leave behind when she comes to the hospital. Infection accounts for the purulent sputum which even now she is coughing up: asthma at the moment is in abeyance, but her chronic bronchitis continues, as evidenced by cough and purulent sputum. Infection of the paranasal sinuses is practically bound to occur in a patient in whom an allergic swelling of the nasal mucosa persists throughout the year: with intercurrent infection in a cold there will develop a sinus infection which persists because normal sinus drainage is interfered with by the swollen mucosa. When the infection has lasted long enough, it will destroy the normal ciliated epithelium of the mucosa and so still further hamper drainage. Such sinus infection holds a double threat for the asthmatic in that it not only can act as a source of continued bronchial infection but may also make possible a sensitization to bacterial protein.

The indications for further study and treatment of this patient therefore may be summarized as follows: Test with proteins of foods occurring in her diet (this means from 100 to 150 foods) and then restrict her diet to those foods which gave negative reactions. Test her with those inhaled substances that occur in her environment (feathers of various birds; cat, dog and horse hair, wool, cottonseed, orris root, kapok, silk, pyrethrum, tobacco) and carefully eliminate all that in any degree produce a reaction. Test her with an extract prepared from her own house dust, and if she is found sensitive, eliminate dust-producers as well as possible, above all, from her bed room (bare floor, no upholstered furniture or unnecessary hangings, painted walls, pillows and mattress of non-reacting materials, perhaps covered with dust-proof material, such as rubberized sheeting or oiled silk). Test with extracts of air-born pollens occurring in this Province and give pre-seasonal or perennial injections, *secundum artem*, if she be found sensitive. Remove all polyps, but do nothing to the sinuses until the effects of avoiding allergenic causes are noted. Such avoidance may result in subsidence of allergic swelling of the mucosa and this in turn can facilitate natural drainage of the sinuses and so effect a cure. If, after six weeks of avoidance, nasal swelling is still present, and if she has been found sensitive to her own house dust, treat her by injections of an extract prepared from her house dust. If in eight additional weeks, evidence of sinus infection and bronchitis persist, then adequate sinus surgery should be undertaken, followed by injections of an autogenous vaccine. In all injection treatment, whether pollen, dust or vaccine, remember that if a constitutional reaction follows an injection, this proves two things: first, that the substance injected is probably one to which the patient is sensitive, and therefore ought to prove very helpful in treatment; and second, that the dose which produced the reaction was too large.

As for the diet restrictions, they may be removed, when the patient remains free of symptoms, in the following way: The forbidden foods are returned to the diet, one at a time and at intervals of five days, during which

the food in question is eaten freely, and, depending on the effect noted, that food is then permanently admitted into, or banished from the diet.

I have attempted, in the two hours at my disposal, to give you an outline of the whole subject of clinical allergy. In so doing, I fear that I have been unjustifiably dogmatic and categorical in much that I have said, partly because there was so much ground to cover, partly because I wished to emphasize certain points and partly because time did not permit a detailed presentation of all opinions in controversial matters. I hope, however, that your own good clinical sense will preserve in you a healthy academic skepticism and the wish to prove for yourselves the truth or falsehood of the gospel I have preached. I am reminded of the old negro preacher who cautioned his flock of a Sunday morning with the words: "Remember, it ain't so much the things you don't know, as the things you know that ain't so, that gets you into trouble."

Lung Abscess and Its Complications*

VICTOR O. MADER, M.D., F.R.C.S.(C), Halifax.

LUNG abscess has been chosen as my subject for this evening because it is a lesion of both medical and surgical interest and its high mortality demands our greatest respect.

Lung abscess appears to occur most frequently (1) following operations, especially operations on the upper respiratory tract or the mouth. The post-operative cases may occur after either general or local anaesthesia. It is known that (2) aspiration of foreign material such as a tooth or a peanut may constitute the origin of an abscess of a lung or pulmonary gangrene. A considerable proportion of cases (3) follow pneumonia. (4) Wounds of the lung account for a small number. An abscess of the lung occurs as a complication in a fairly large number of cases of (5) carcinoma of the bronchus or lung and the presence of such a causative lesion must always be kept in mind if no other cause can be found. A small but important group of cases begin insidiously (6) without known cause.

Whether an abscess in a given case originated from material introduced by way of the bronchial tree or whether it resulted from embolism and infarction, cannot be determined with certainty except in a small percentage of cases. So much has been written supporting the various theories of pathogenesis that the resulting maze is likely to bewilder the clinician and make him believe that it is a matter of academic interest only. Two important observations lead one to believe that the embolic theory of the production of this lesion is the correct one in many instances. If pulmonary abscess resulted commonly from aspiration of blood or infected material, it is logical to expect that a high proportion of cases would show involvement of the right lower lobe; for, while materials entering the bronchial tree could theoretically have access to any part of the lungs, the larger passageway and the straighter course to the right lower lobe would tend to lead most foreign substances in this direction. If embolism were the important factor in the production of lung abscess, one might expect to find the lesions widely distributed throughout the lung fields. Since most reporters agree that abscess of the lung in post-tonsillectomy cases is commonest in the upper lobes, one is prone to believe that the embolic theory of the pathogenesis is the correct one in many cases. I am convinced that either aspiration or embolism may cause a lung abscess and I believe that this can be proved in a sufficient number of cases to admit the truth of either theory according to the circumstances.

Pulmonary abscess is not a specific disease in the same sense as pulmonary tuberculosis. In most cases a variety of organisms are present. In general, all of those bacteria which inhabit the mouth are likely to be found at various times in different cases of pulmonary abscess or gangrene and in most cases several organisms are present at the same time. The anaerobic organisms such as the fusiform bacillus associated with the spirillum of Vincent account for a considerable number of cases, but a large variety of organisms have been isolated including the various streptococci, staphylococci, pneumococci, Friedlanders bacillus, micrococcus catarrhalis and many others including the yeasts.

* Read before the Annual Meeting of the Western Counties Medical Society, Yarmouth, November 10th 1937.

The initial symptoms of a lung abscess are constitutional. During the formative stage of the abscess there may be no sputum. This period may be short or may last several weeks. When a communication with the bronchus is effected a foul expectoration makes its appearance. In the acute stage the patient is sometimes able to indicate the position of the lesion by the location of the pain. Cough is usually very troublesome, and associated with copious amounts of foul sputum which is often blood stained. In addition to the cough, foul expectoration and pain, the most common symptoms are fever, chills, sweats and loss of weight, strength and appetite and clubbing of the fingers.

The physical signs of pulmonary abscess are not pathognomonic. The only important evidence to be gained by physical examination is the demonstration of a cavity or cavities. Small cavities are much more liable to be overlooked by methods of physical examination than by x-ray examination. Nevertheless a large cavity should never be missed by one who is at all expert in the technique of physical examination, as the signs are then likely to be typical. There may be bronchial breathing over an area which is tympanitic on percussion. Percussion may reveal cracked-pot sound. There may be also coarse, bubbling, fine and metallic rales. An increased whispered pectoriloquy and voice sounds with amphoric quality may be present. The physical signs may be brought out in a more striking manner by having the patient partially empty his cavity by cough and posture.

The sputum in cases of pulmonary abscess and gangrene usually presents striking features, although a diagnosis cannot be made by sputum alone. All the features of the sputum may be simulated in cases of pulmonary tuberculosis in which cavitation has occurred. The odor is variable. An extremely foul odor is indication of putrefaction and is therefore more pronounced in those cases which are usually classed as pulmonary gangrene, but in practically every case of lung abscess the sputum is foul at one time or another. After standing in a glass vessel, the sputum usually separates into three layers: at the bottom there is a sediment of pus, upon that is a thin turbid fluid, consisting mostly of saliva, and on top, a layer of foamy mucus mixed with mucopurulent material. The presence of elastic tissue in the sputum indicates that a destructive process has taken place.

The x-ray takes an important place in the diagnosis and localization of lung abscess. A distinct fluid level in two views simplifies the matter, if it is present. Films should be taken in various positions and at frequent intervals. The final diagnosis rests with the history, the general state of the health, the presence of pus-laden sputum, and the demonstration of a cavity both by a physical examination and x-ray appearances.

The complications of lung abscess are serious in the extreme, and are frequently the cause of death. Empyema or pyo-pneumothorax result from the rupture of an abscess into the pleural cavity. This is usually accompanied by a broncho-pleural fistula which may complicate the later conduct of the case. An empyema of this type with mixed infection is extremely virulent and must be handled with great care.

Haemorrhage from a lung abscess may be very profuse and is a frequent cause of death. If a large vessel is eroded the patient may literally drown in his own blood.

Brain abscess occurs secondarily to lung abscess quite frequently. Indeed, lung abscess is the second most common cause of brain abscess.

Mediastinal abscess is an occasional complication.

Treatment: There is no doubt that a considerable number of cases of this disease recover on medical treatment alone. This consists of rest in bed, postural drainage, intravenous salvarsan in cases due to spirillum of Vincent. Vaccine therapy has been used by some with variable reports of success. Diathermy and short wave therapy have been used. The brilliant results attributed to these methods of treatment are difficult to assess but from an imperical standpoint they appear to be occasionally of benefit. When an abscess becomes chronic, that is when it has existed for eight to twelve weeks, medical management alone will not effect a cure unless definite improvement has already begun. Bronchoscopic drainage has given good results in some cases but the percentage of cures obtained by this method of treatment are not convincing. Artificial pneumothorax has occasionally resulted in cure, but this method is advised against for several reasons. The collapse produced by the pneumothorax is likely to compress and narrow the bronchus which is draining the abscess, resulting in less efficient drainage and producing a spreading pneumonitis. It is also supposed to render the rupture of a peripheral abscess into the pleural cavity more likely. Phrenicectomy is sometimes useful in helping to collapse basal cavities. A temporary phrenic crushing should be used which will later allow normal diaphragmatic function if a cure can be effected. Thoracoplasty has a limited field of usefulness. We have used it in conjunction with other procedures with success in one case which I shall show you later. Thoracoplasty is very useful in the final closing of a chronic empyema cavity which frequently results from an abscess rupturing into the pleural cavity.

External drainage of a chronic abscess is the method of choice in most cases. The indication for the operation is an abscess which has failed to improve on medical treatment. Many recent writers advocate early operation by this method, and claim that the mortality from this disease can be greatly reduced even through a few cases might be attacked which would heal by more conservative treatment.

The operation should always be done in two stages. After localization of the abscess a window is made in the chest wall down to the pleura, by resecting two or three ribs over the point where the abscess is most superficial. The parietal and viseral pleurae are sutured together and the wound is packed. Five to seven days later the pack is removed and there will be firm adhesion between the two pleural surfaces. The lung can now be explored with a ventricular needle and when pus is found the abscess is opened with the actual cautery. This is done very slowly and a cone shaped drainage tract is produced. This is packed. Healing takes place by granulation. Frequently a broncho-cutaneous fistula results which may require closure later.

A complicating empyema is treated by aspiration and later by rib resection and open drainage. Closed drainage may be maintained for a period if there is no broncho-pleural fistula. An empyema of this type can be cured by thoracoplasty following either the spontaneous healing or the operative closure of the broncho-pleural fistula.

Haemorrhage from a lung abscess may be so sudden and severe as to cause sudden death. Blood transfusion is the only effective treatment, pending the drainage and packing of the abscess.

Lung abscess carries a tremendous mortality varying from 20% to 50%. The actual mortality of cases treated by either medical or surgical means is probably about 35%.

The cases which I shall show you, have been picked at random and show, I think, some of the problems which arise in the treatment of the disease.

First patient is W. R. 31 years of age. Occupation was longshoreman. This patient came under observation during the latter part of 1934 complaining of cough, foul expectoration and intermittant haemoptysis. The x-ray plates of this case show very well the progress of the lesion from an acute to a chronic abscess. Haemorrhage was the chief complication and several times threatened life. The treatment of this case might be criticized in various ways. The lesson to be learned, however, is that the operative procedures of phrenectomy and thorocoplasty appear to have prevented death from haemorrhage and there is now a clinical cure of the abscess.

Second patient is C. E., age 40. He was admitted to the Victoria General Hospital on December 14, 1936. His present illness began in September 1936. Here again the x-ray plates show the progress of an acute to a chronic abscess which later ruptured into the inter-lobar fissure resulting in a pyo-pneumothorax. Drainage resulted in a chronic empyema with a broncho-pleural fistula. The fistula has healed and the patient is now able to carry on his work, with a persisting sinus of a small chronic empyema, which is becoming smaller. A thorocoplasty may be necessary to complete the cure.

Third case is D. E., age 4 years. He aspirated a bean in June 1936. In August the bean was removed through the bronchoscope. A small amount of pus was present in the right lung at that time. X-ray revealed atelectasis of the lower lobe of the right lung. The patient developed pneumonia in September 1936 from which recovery was incomplete. Re-examination in October showed the patient to be pale, thin, fretful, drowsy and continuously coughing with foul expectoration. Examination revealed an empyema which was first drained by aspiration and later by rib-resection. This patient recovered without further operative procedure. This case demonstrates how a lung abscess which drains into the pleural cavity may heal after the empyema is drained.

Fourth case is F. M., age 10 years. She was admitted to the Victoria General Hospital on August 30, 1937 complaining of pain in the chest. The patient had a tonsillectomy eleven days before the onset of the present illness. The films show the progress of this lesion. Aspiration revealed pus, anteriorly, and clear fluid, posteriorly. No operation was performed. She remained in hospital until her death from a severe pulmonary haemorrhage on October 10th.

Fifth case is G. C., age 50, demonstrates the relationship between lung abscess and bronchiectasis. This patient died of air embolism following an attempt to drain a lung abscess in a region of bronchiectatic cavities.

Sixth case is Mrs. W. P., age 34. She developed an acute lung abscess following an incomplete abortion and removal of retained products. She coughed up large quantities of necrotic lung tissue for several days, and her case appeared to be utterly hopeless. She recovered completely on medical treatment.

Seventh case is C. F. M., age 29. He suffered from a chronic lung abscess of many months duration and was doing well on medical treatment. He was admitted to the Victoria General Hospital with paraplegia from brain abscess which was drained. He died and although we were unable to get an autopsy we felt that there was more than one abscess.

Discussion followed presentation of the X-ray films of the cases.

The Modern Treatment of Fracture of the Neck of the Femur

W. ALAN CURRY, B.A., M.D., F.R.C.S. (Eng.) and (Can.)

MY interest in the advance of treatment of this fracture has been stimulated by visits to clinics in the U. S. A. during the last few years.

Fractures of the upper end of the femur are classified into those involving the neck and the great trochanter. The latter are not difficult to treat, as they invariably unite by bone. From time immemorial, fractures of the neck have been distressing to handle, on account of the frequent failure to unite by bone. It is estimated that the mortality rate is 25%. The causes of death are the age of the patient and the liability to intercurrent pulmonary and cardio-renal complications. Females are more liable to the fracture, on account of the angle of the neck approaching coxa vara and bone atrophy, which occurs in old age.

The blood supply of the neck has been proven to be abundant. The main supply of the head is derived from branches penetrating it from the neck and capsule. The small vessels which accompany the ligamentum teres are not sufficient alone to maintain its nutrition. It has been clearly demonstrated that hyperaemic decalcification occurs in fractures which are not absolutely immobilized. The older method of treatment failed to give good results because more or less movement occurred at the site of the fracture and hyperaemic decalcification explained the frequent occurrence of non-union and sometimes death of the head.

The first great advance in the treatment was due to Royal Whitman's advocacy of a proper reduction by extension, internal rotation and abduction. He also pointed out that fractures which were reduced in a valgus position, gave a much better end result than those which showed coxa vara. A large plaster spica was applied including the costal margin and reaching to the toes. Bony union was obtained in about 50% of cases. The disadvantages of this method are many. The patient has to lie flat on back in bed for at least three months. On account of old age and inability to sit up, pulmonary complications are common. Pressure sores are frequent. The patient is helpless and requires hospital and expert nursing attention. On removing the cast, the stiffness in the knee joint is very troublesome to relieve. A general anaesthetic is often necessary to break down the adhesions.

Böhler of Vienna has recently advocated a modification of the Whitman technique. He stresses the importance of getting the patient up early and walking with the aid of crutches. This is an important innovation, as the mortality rate is lowered by diminishing the danger of pneumonia. The patient is much more comfortable and happy, by not being confined to bed. Walking and weight bearing increase the chances of obtaining bony union.

Smith-Peterson of Boston is the pioneer of internal fixation of fractures of the neck of the femur. He invented a three flanged nail, which accurately and permanently immobilizes the fracture. His early cases were done by an

extensive open operation, which exposed the fracture and reduction was carried out under vision. The nail was then driven through the shaft, just below the great trochanter, along the neck and firmly engaged the centre of the head. He has modified the operation on account of the shock produced, and risk of infection. A closed reduction of the fracture is carried out by the method of Whitman or Leadbetter. The position of the fracture is checked by the portable X-ray. An incision is then made on the outside of the thigh exposing the great trochanter and the upper end of the shaft. The nail is then driven through the bone arriving at the head. Many mechanical protractors have been invented to aid the insertion of the nail at the correct angle. Two X-ray views, antero posterior and lateral, are essential features. They may have to be repeated three or four times before the operator is satisfied with the position of the nail in the head.

Sven Johansson of Sweden, Watson Jones of England and King of Australia have simplified the technique. A Kirschner wire is first introduced and a check-up of its position in the head is made by the portable X-ray. A cannulated Smith-Peterson nail is then threaded over the guide and driven into the head.

Austin Moore of Carolina has a still further and more simple technique. He inserts three stainless steel nails through the shaft below the great trochanter. The head of the femur is marked by a skin clip over the femoral artery, just below the inguinal ligament. He does not use any protractor. The nails are aimed at this point. They are driven in at angle of 135° , which corresponds to the average inclination of the neck of the femur. His surgical instruments are simple and inexpensive.

The after treatment of these cases is very simple. No external splint is applied. They are encouraged to sit up in bed immediately. Active movements are carried out in the hip and knee joints from the outset. They are got out of bed within a few days and use crutches for six months. Weight bearing is not advisable until that time has elapsed. Bony union does not take place definitely for a year. The nails are usually removed at the end of a year, but may be left longer.

The results in a large series of cases give over 90% of bony union. The oldest patient was 93 years of age. There is not any operative mortality. Many lives have been saved which would have been otherwise lost by confinement to bed in a plaster cast.

I have had the privilege of hearing these men speak and have seen their operations demonstrated. Internal fixation of fractures of the neck of the femur is the greatest advance in the treatment of fractures during the last ten years. There cannot be any doubt that Smith-Peterson's discovery has not only revolutionized the prognosis of this injury, from the point of view of union of the fracture, but it is also to be regarded as a life saving measure.

Observations

T. M. SIENIEWICZ

THIS summer I had the privilege of spending a few delightful weeks in London. The Brompton Hospital for diseases of the chest on Fulham Road was my chief centre of attraction. It is a large institution with four to five hundred beds. The medical side is as interesting as the surgical, though the latter took up most of my time. The following observations will be briefly described:—

1.—*Bronchograms: Lipiodol injections.* In the X-ray Department about 125 to 150 chest cases were X-rayed daily. A great many of these examinations were bronchograms for the purpose of determining the status of the bronchial tree.

Lipiodol is injected in small quantities only. Where we are accustomed to injecting 20 cc. they use 6 cc. It is injected in 95 per cent of the cases directly into the trachea through the crico-thyroid membrane under local anaesthesia. Routinely the whole lung is injected on the side to be investigated and the contralateral lower lobe. This method is much more satisfactory than the supraglottal method which we so commonly employ.

The intratracheal injection of seven minims of ten per cent cocaine, before the injection of oil is made, is of great help.

2.—*New growths: Bronchoscopy.* In the X-ray Department one could study films of new cases of lung tumors every day. Many cases of malignant disease in the thorax were formerly regarded as mediastinal in origin. They are now found to be due to carcinoma of the bronchi. The use of the bronchoscope and the removal of biopsy specimens greatly assist in the diagnosis of these conditions. The bronchoscope is very widely used by practically all members of the staff. Each of the surgeons does his own bronchoscopic examinations under local anaesthesia.

The method of anaesthetizing the larynx appears to be very simple indeed. It consists of application with gentle pressure, for a period of one minute, of a pledget of cotton soaked with ten per cent cocaine to the pyriform fossa on each side of the base of the tongue. This process is repeated once so that it takes four minutes for this procedure. Then some cocaine is injected into the trachea and the patient is ready for the examination.

3.—*Lobectomy and pneumonectomy and cardiac surgery.* The thoracic surgeon has perfected his technique so well in the past three or four years that the mortality rate from lobectomy is about equal to that of surgery of the upper abdomen. A great many of these operations were done for localized bronchiectasis and malignant tumors—and with great success. All lobectomies were done in one stage. The collapsed lobe on the operated side is quite soon re-expanded by means of a suction apparatus connected with the water supply. This also brings the heart and mediastinum and the diaphragm in towards the space left vacant by the removal of the lobe. It also rapidly brings about a compensatory emphysema of the remaining lung tissue on the operated side.

The expert anaesthetist and the special post-operative care contribute materially to the success of this operation.

These surgeons are also invading the realms of the cardiologist. A brilliant operation was performed on a case of Pick's disease in which the calcified pericardium was removed and the pericardial ostia of the superior and inferior venae cavae were freed. The grafting of the omentum to the ventricle to supply a new circulation in cases of coronary embolism or thrombosis seems to offer some promise of relief in some cases.

4.—*Extrapleural pneumothorax*. Recently there has been a revival of a method of apicolysis by Graf and Schmidt of Germany. In May of this year it was undertaken at the Brompton. It consists of (a) the removal of a small portion of the third, fourth or fifth ribs posteriorly; (b) the separation of the parietal pleura over the upper lobe down to the lung root on the mediastinal surface; and (c) of maintaining the apical collapse by an extra-pleural pneumothorax. Although the method is of recent development yet I think it holds a wonderful promise for the future. I had the opportunity of seeing practically the entire series done to date at the Brompton and I was most favorably impressed. The case selected for this operation is one of advanced tuberculosis in the upper lobe, fairly recent in origin, and in whom an artificial intrapleural pneumothorax cannot be carried out because of adhesions. Previous to this such a case would be submitted to a more or less drastic thoracoplasty.

There are cases which one soon finds out are not suitable for an extra-pleural pneumothorax. These are old, chronic, extensive upper lobe lesions with stiff-walled cavities and considerable displacement of the mediastinum. Such cases should be submitted for thoracoplasty.

It should be pointed out that if an attempt at an extrapleural pneumothorax proves unsuccessful because of adhesions between the parietal pleura and the chest wall, then one can immediately do an extrapleural thoracoplasty of the upper part of the thorax.

5.—*Anaesthesia:—cyclopropane: spinal*. I refer to this because practically all of the lung surgery was carried out with cyclopropane anaesthesia. I believe that it has very firmly established itself as a most valuable addition to the list of general anaesthetics. It is more powerful than ethylene and nitrous oxide and the concentration is only four to six per cent. Induction is rapid, with no increase in the rate and amplitude of respiration, and with a rapid recovery free from after-effects. It has no irritant effect upon the respiratory tract. Premedication, here, consists of morphine and scopolamine, and sodium evipan. Cyclopropane should be administered with oxygen in a closed circuit with efficient carbon dioxide absorption.

I saw spinal analgesia used for lobectomies by one surgeon. This consisted of premedication with omnopon, scopolamine, and intravenous pentothal sodium. Then percaine (1:1500) was injected.

The patient would breathe quite well and, the important feature, his cough reflex remained active so that sputum or secretions could be expectorated quite easily although the patient was dozing quite nicely.

6.—*Tomography*. I went to the X-ray Department at St. Bartholomew's to see this special bit of work. I believe this recent advance in radiology is most important. It is only in its infancy and it will not be long before it will be generally used. It is also referred to as planigraphy. It is a method

of X-raying a single plane of any part of the body at any desired depth so that shadows above and below the plane are excluded from the examination. The apparatus made by one of the roentgenologists was attached to the ordinary table at a remarkably small cost. So far it is almost wholly used in the examination of the chest. It will reveal concealed cavities and demonstrate obstruction of bronchi by carcinoma. If a cavity is suspected, perhaps within a dense atelectatic or collapsed lobe, several pictures can be taken at any number of depths—say four to six—and it will be clearly shown on one of these. In other words, it will be brought into focus at one of the levels.

Tomography is also being used in other branches of radiology—bones and joints, the accessory sinuses and ventriculography. It is a most interesting and important development.

7.—*Zinc ionization.* I visited St. George's Hospital, Hyde Park Corner, to determine their method of treatment of Hay Fever. Their treatment of vaso-motor rhinitis, whether it be of the seasonal or the non-seasonal type, consists of zinc ionization of the nasal mucosa. The success of this treatment depends on (a) proper anaesthesia; (b) most careful packing of the nasal cavities, and (c) proper dosage of the galvanic current. Bad results from this treatment are invariably due to a cauterization obtained instead of ionization. Ionization does not alter the allergic state of the individual but it renders the mucosa less susceptible to vascular and secretory reactions, and interferes with absorption of pollens, and other allergens.

In addition to the above I believe that treatment of the specific factor is most important whether it means a desensitization to pollens or to one or more of the many dusts or a removal of these from contact with the patient.

Fragments from the Diary of a Roentgenologist

Editor's Note. *The following papers were found among the effects of Dr. C. M. Jones, Roentgenologist to the Halifax Infirmary, who had been absent from the city for some weeks.*

Wednesday, Sept. 8, 1937.

It is a beautiful morning. The ground is covered with dew and in the early morning sun the wide fields twinkle a welcome to me—a roentgenologist going to a convention. The train is moving slowly after the wild rush through the night and on all sides is heard the bustle and excitement of that friendly crowd getting ready to leave. I will miss them—for I know no one in this city—the big Southern with the drawl—he called his wife “Toots” and she called him “Handsome”—an evident misnomer, the little school-teacher with the violet eyes, the stocky All State Guard, and the old man with the beard who snored in two separate registers. Ships who pass in the night.

Chicago—The City of Al Capone and Dillinger; of tough cops and the Cubs; of soldier's Field and the Loop; of the World's Fair (what little remains). It appears to be just another city and not a very clean one. Traffic pours past the station in a continuous stream and one steps lively. Taxi-ing must be a good job here for jams are plentiful except in the meters. The Palmer House, Convention headquarters is very large, a whole city in itself. Have a lovely room on the air shaft. Sun streams through from the window from 11:56 to 12:09 p.m.

Thursday:

To-day I had exams. A most interesting group of lads from all over the states and some from South America. All stated that they were just there “for fun” but the inordinate number of cigarettes consumed belied their statements. We paraded from room to room and talked and talked—or listened while the right answer was indulgently explained.

One Radiologist with a mop of white hair will stand out in my memory. He was the only one enjoying himself and after he had asked me to classify brain tumors, to discuss the biochemistry and physiology of Prolan A, and to give the anatomy and histology of bone marrow; it was easy to see why. To the light hearted (?) examinee his groans and lurid exclamations at my wild shots in the dark were most conducive to mirth and after a most fearful bull and a most agonized groan we discussed—Tuna fishing. After that a Collins was indicated but it did no good. So to bed.

Friday:

One of my ambitions was to see a major league baseball game. To-day the Cardinals were playing so to Wrigley Park went I. A great square of green grass with a smooth clay path from base to base, a massive electric score board, and stands towering overhead. There were about 25,000 there

and they only partly filled the bleachers. Dizzy Dean fully lived up to his name. He scowled at the crowd and howled at his opponents climaxing it all by falling over his own feet and spiking himself. When his team-mates clustered around he waved them aside while the photographers got a few shots. The speed with which the game was played was amazing and the handling of the ball superb. The game had all that one could wish; there were two double plays, two home runs and some spectacular catches in the out field. In the seventh inning St. Louis had two men on with none out and Larry French bore down striking out the next three. I lost my voice and my way home. Finally got a taxi and home safely—for \$2.00. Chicago is a large city.

Sunday:

Bright and clear and as far as I can see it would be impossible to know it is Sunday without a calendar. Streets are crowded, some stores and the theatres open; baseball and football in all parks. Many of the churches were closed for the summer, but one church had lectures by prominent business men—getting into Heaven on a bond issue.

Registration opens to-day for the Convention and a line formed blocks long. (*It was present for two days. Nearly 3,000 were enrolled.*) The International Congress is truly international. It is the meeting of radiologists from all parts of the world and is held only once in three years, and this, the fifth, is the first to be held in America. All the great ones are here—Holthusen and Holfelder from Germany. Barclay and Reynolds of England, Coutard from France and Phahler, Cole, Kirklin, etc., from the United States. Hindus and Chinese—every race and color are represented. The next congress will be held in Berlin—if Hitler doesn't get above himself. This is the greatest of them all—American genius for organization. Tonight I attended the last open air concert of the season. The concert was on the lake front and the orchestra of 300 musicians was conducted by Dr. Stock. I was about one hour early and marched in like all the King's Men to establish myself in the Governor's chair from which I was shooed by a scandalized trooper. The music was magnificent—imagine the tone from twenty base fiddles—and the programme was good. However, the cold wind that came from the lake drove me home before it was over—and I had scoffed at the people in overcoats and thought how effete were these Chicagoans—but how wise. Back to the hotel and the main floor was thronged with people going to the ballroom; I joined the rush. It was a big dance and the music was going round and coming out everywhere. My grandmother would have made some terse remarks about Sodom and Gomorrah.

Monday:

The Convention opens tonight so guess I will examine a few museums this afternoon. The Field Museum is one of the finest in America. It consists of one large hall and two wings. The main hall was about sixty feet high and a mile or less in length and contained two large elephants and two gigantic bronzes. Very systematically I started in hall 1 which contained bronzes, life-like statues of all the races of to-day. Some were so savage looking that my respect for missionaries has increased; in fact it would be impossible to get me into the same country with some of these lads, specially African Dwarfs—horrible little devils. There were a few of the untouchables from India and they were so dirty that it was plain from whence came their names.

Nearby were a lot of skeletons of prehistoric stone-age men. Some of the skulls showed trephining operations and by the rough work I suspect it was by one of my neighbour's ancestors. If I had lived then I wouldn't have lent him my axe.

From the hall I passed into the cannibal section full with thousands of articles of every day life, from whole villages to rings and toe nails. The finest work was done on their weapons showing that man hasn't advanced much in some ways—See Bullets for Bread and other modern catch words.

Life size figures stood about, worked, cooked and slept; even wedded. The Indian section was the largest and the whole halls were given over to one tribe with all its distinctive modes of life.

The feet were now beginning to ache but never say die so I started on the animals. All the wild animals were represented, life-like and in their home settings—polar bears and ice, lions with tropical birds and flowers. The varieties of deer alone filled one large hall and there were bears and gophers, squirrels, foxes, wolves, lions, tigers and leopards, world without end.

The next hall showed about a million birds or so from one hundred varieties of the humming bird to sparrows, swallows, ducks, eagles vultures, and ending in ostriches. One whole panel contained just one bird in all his glory—the robin.

Lastly I saw fish and more fish from the smallest of trout, bass, ccd, sturgeon, salmon skates, crabs, eels, sharks and whales—so much in fact that I was slightly sea-sick and then followed snakes from little garter snakes to thirty foot boas.

It was interesting to note that the smallest and the prettiest were the most dangerous—very human like of the snakes.

Well, I was through! I had covered only one floor and there were two more. The one I had covered was but slightly touched and so will wait till I have retired to go back and finish it. Ended up in the basement with a huge plate of Boston baked beans and blueberry pie—the first decent meal I have had.

After a smoke I had recovered enough to get across the road to the Aquarium—another large building with big, dim halls; the walls are plate glass with indirect lighting and with the colorful fish the effect is startling.

The most beautiful fish are here with all the colors of the rainbow and the most ugly with rows of teeth and malignant eyes. Some of the fish are of such weird shapes and flashing colors, that any imbibor strolling in here would jump on the wagon for life. In one tank are a lot of big perch and one small one who is quite off his rocker. Swimming wildly about he chews pieces out of the tails of the others who run—just like the cartoons of Japan gobbling China. One crab is tight and staggers about falling down every little distance. His eyes roll and antenna twirl like propellers; every now and then a fearful hiccough lifts him off the bottom and he stares about in astonishment.

Monday:

The Convention opened tonight—indeed a great show! About two thousand of us trooped into a large ballroom the size of the ice surface at the arena and gracefully placed ourselves on rather straight chairs—an inauspicious start.

The fellows of the college paraded in about one hour late—capped and gowned and the band played the Star Spangled Banner. Dr. Schinz of Switzerland opened the Convention with a long speech in which he stressed America's

contributions to Radiology. He is a famous radiologist but unless he spoke in a prophetic vein, United States does not extend to the Arctic Ocean and Osler and Banting are Canadians.

He then inducted Doctor Christie into the office of President of the fifth Radiological Congress. Dr. Christie welcomed us all to Chicago and in his presidential address spoke of the debt we owe to the anatomists in our work.

Dr. Mayo, speaking for the surgeons, touched on the value of X-ray to his specialty—a powerful diagnostic tool and a great therapeutic agent in the treatment of malignancy. After listening to these eulogies till one was puffed up with pride, it was quite a shock to hear Dr. Gosta Forssell of Sweden proceed to tell us our shortcomings. His plea is for organization of radiologists and the recognition of radiology as a definite specialty. Special chairs should be founded in universities and special training and more training in hospitals. Further speeches followed but they fell on deaf ears for it was after twelve o'clock and this roentgenologist was asleep.

Tuesday:

Tonight we heard the Caldwell Lecture given by Dr. George Phahler. Dr. Phahler is one of the foremost radiologists in the states and one of the pioneers in the field of therapy. He is the inventor of the saturation method of treatment which consists of getting a large dose into the affected tissue and maintaining it in small doses at short intervals over a long period, thus catching all cells in their weak moments—when dividing to form new cells. The lecture was on radiation in carcinoma of the breast. He divided carcinoma of the breast into three groups.

1. A tumor of the breast without axillary metastases. No pre-operative radiation is given. At operation metastases may be found but in any case a full course of treatment is given beginning about ten days after the operation and treating the breast, axilla and supraclavicular regions. Of his series of 2,300 cases he has followed 90% of this group showed a ten year cure.

2. Tumor of the breast with affected glands in the axilla. These cases are given full pre-operative radiation and after the skin effects have subsided, surgery and full post-operative radiation. The pre-operative radiation does not interfere with the surgeon, and destroys the more malignant cells while lessening the activity of others. The post-operative radiation destroys remnants, implants. In many cases the tumor has shrunk from pre-radiation and the surgeon's task has been lightened. Statistics in this type show 25% ten year cures by surgery alone and 50-60% by surgery and radiation. The bulk of the cases fell into groups 3 and 4 Broder's, but it has been his experience that all groups can be seen in the same tumor.

3. This group comprises tumors involving the skin and deep fascia and are treated by radiation alone to get the best results. It is noted that in all his cases he has not had any interference with healing of the incision. The presentation was perfect and illustrated with charts and curves. It appears to illustrate the real necessity for the combination of surgery and radiation for the best results in this common type of cancer.

Wednesday:

Tumors of the bladder. George Phahler.

Review of clinical history with pain, haematuria and frequency being the prominent symptoms. . . .75% involve the ureters and urethral orifices.

Tumors as small as $\frac{1}{2}$ " in diameter can be identified—advantages of air cystogram—90% can be diagnosed by this method. Of special benefit when there is much bleeding. The involved portion does not distend with the air and leaves a pucker in the bladder wall. 86% are on the lateral walls of the bladder . . . Prone, supine and lateral films are made. 75% are inoperable when seen but in the early cases coagulation and radium appear to be the best treatment. In the operable cases, deep therapy may so shrink the tumor down that coagulation will finish the job. When the uretral openings are involved, therapy should be given and then surgery may be some benefit. In the lateral walls of the bladder, excision or coagulation and then therapy. Dosage 4000 r units through 5-7 ports.

In inoperable cases 50% have shown 2-9 year cures. In forty-eight cases operable, but treated by X-ray for various reasons, twenty show no evidence of tumor to date. . . . bleeding stops in 3-4 weeks. Frequency increased. . . . by the treatment?

Notes—In fractures of the vertebrae the disc is damaged in 85% of cases with extrusion of the nucleus pulposus. The disc may also be damaged by lumbar puncture and the nucleus protrude. Protrusion of the nucleus appears to be cause of many cases of backache.

Placenta praevia may be diagnosed by doing a cystogram and measuring the distance between the filled bladder and the presenting part. Certain rules and normals are given. Tomography seems to be taking a large part in this Convention. Many types of machines are described; some types for certain regions. Earliest work was done on cavitation in the lung; now special machines will examine the skull, spine and abdomen. Apparatus is expensive but appears to be a definite advance. . . .

A large amount of "hooy" about X-ray diagnosis of appendicitis. The large number of findings indicative of inflammation of the appendix, if generally adopted, would increase the incidence of gout in the surgeons and produce a race without appendices—(Darwin).

Noted the fact that nearly all clinical histories specified the Wassermann test in serology. . . .

Examination of tumors in the breast by injection of air and taking films. Seems to be very useful in the differential diagnosis of benign from malignant tumors. . . .

Cancer of the cervix. Much time was devoted to this subject. On the whole the statistics are very good in the Group 1 cases with 75% five year cures dropping to 30% in Group 2 and 15% in advanced malignancy. It should be noted that in the earliest of cases 25% show involvement of the pelvic lymphatics while in the average case 65% show involvement of the glands. Treatment is intra-cervical radium and deep therapy. Best results were obtained by deep therapy alone—(Coutard). Interstitial radiation needles into the parametrial tissue was advanced as being of definite benefit. . . .

Over 12,000 square feet of films and transparencies are part of the scientific exhibit. Every conceivable type of disease is shown with elaborate case histories; in many cases, series of films follow the case to its conclusion.

Moving picture machines ran continuously and many films are colored. Excellent results are noted by therapy in pneumonia, gas gangrene, sinusitis, boils and carbuncles, mastoiditis and erysipelas. In the technical section 400 K. V. machines were the centre of interest with tomographs running close second.

General Electric and Siemens put on the best shows.

This evening I went back to the park to see the Planetarium. A most marvellous show! The building is octagonal and there is a large hall running around the wall inside. The walls were covered by huge transparencies of the moon, eclipses of the sun, comets, etc. A large museum contained models of old telescopes, (of which Galileo's held the centre spot of attraction), compasses, sextants and other devices for measuring angles of stars. In the centre of the building is a circular hall with an hemispherical roof which is smooth and white. In the centre of this hall is a high framework of steel and slung in the centre a huge bobbin studded with small openings each one containing a lens. There are nearly two thousand lenses and the bobbin is composed of separate sections which would move independently. All around the wall is a relief map of Chicago and the audience faces the centre. At one side is a big desk like an organ console, full of switches and buttons. The lecture was on the precession of the equinoxes—the wobbling of the earth's axis. First he showed us how the wobble started using a bicycle wheel and a few other simple pieces of apparatus. Then he sat down at the desk and the lecture began. "This is Chicago and the date is Sept. 15th, 1937. The sun has set and evening falls." The room darkened very slowly, just like twilight and faint music was heard in the distance. When it got dark enough all the stars came out over head. All the constellations were easily recognizable; Jupiter and Mars were burning brightly. The moon came up and passed through its phases. Then the lecturer rolled back the years. The sun's path dropped low in the sky and the earth's axis turned through a circle so that the large star in the Dragon became the Pole star. It is interesting to note that this was the star that shone down the air shaft in the great pyramid at Gizeh and fell on the altar. Then we went 10,000 years into the future. The ecliptic climbed higher in the sky and many Southern constellations became visible and the Big Dipper fell below the horizon. A wonderful show till the lecturer started moralizing and hoped we would proceed like the equinoxes to greater things—(Sob in his voice and anti-climax!).

Well, it has been a full day and tomorrow is even busier. Guess I will just take a walk around the block and get some fresh air before bed.

Editor's suffix. *Lest the conclusion of this journal leave the reader in any doubt, Dr. Jones did return after many harrowing experiences with Chicago gangland, his diploma (any impression he may have given to the contrary) safely tucked under his arm.*

A Magic Barque

M. G. BURRIS.

THIS is not a story of ghostly adventure on the watery wastes of the sea. It is an account of earth and of one of the problems of earth. It is concerned with the lives of new-born babies, of boys and girls, men and women, wherever they may be, from the time of conception and birth to that last solemn event when their bodies are received back again to the dust from which they came. It is intended as a contribution to the sex and venereal disease problem which has been brought vividly to our attention in recent weeks in the columns of this BULLETIN. I shall do my best to observe the proprieties in a presentation which must at once become both critical and controversial and I trust that I shall not be found lacking in constructive intent and proposal.

My friend, the Editor-in-chief of the NOVA SCOTIA MEDICAL BULLETIN is widely known and wherever known he is admired and respected for his many fine qualities of mind and heart and I believe that he merits it all. Both he and I are engaged in what we trust will be adjudged the vineyard of true Christian endeavour. We have had similar traditions of morals and ethics and we are members of the same Christian Church. These things being so, I may safely remonstrate with him concerning the strange philosophy which he sets forth in his recent editorial, "*Fornication and Disease*" (The BULLETIN, October, 1937). I refer only to the moral and religious issues which he introduced and discussed. His attitude on those issues, in my opinion, was so very unusual as to be startling and so far reaching in its implications that it could not be disregarded. I commented briefly on his conclusions in the November issue, on "the tone and the content" of his remarks and went on to suggest that a more discreet course would have led him to a discussion of the scientific issues alone. He, however, had preferred and as I understand too, he had *insisted* on discussing both moral and scientific issues. This was quite permissible but in so doing he rendered himself liable to criticism on points which the editor of a medical journal must very seldom have to face.

In that same November issue the Editor made reply to my comments. So far as I can interpret that reply he re-affirms his original position. He still regards the moral issues as "unfortunately. . . entanglements" which exist to prevent satisfactory progress being made by scientific medicine on the venereal disease problem. He regrets the necessity of having to consider the moral issues involved. I maintain that the moral issues are by far the more important, that no attempt should be made to separate them, that while they do present difficulties, they must inevitably be met and that therefore, a closer and more thoughtful association of the moral and scientific issues affords the only avenue along which safe progress can be made. Regarding the first of the "constructive suggestions" which he made in his editorial in October, the Editor gently points in November to the "mental effort" required to arrive at "a fundamental change of outlook" where one preventable disease will appear quite as "respectable" as another. He goes on to complain that in spite of my definite accusations I adduced nothing "as evidence in their support" and

finally brings further discussion to "an abrupt close" by seizing upon some of the loose fodder which lay scattered all about the field of his own editorial and from which he made a man of straw, that is to say, he claims that I put on the mantle of Religion in order to protect myself against the "possibility of a defensive reply"!

A reading of the editorial and the facts related above will show how insecurely he constructed that bulwark since he himself first introduced both morals and religion in no uncertain terms but with, as I still believe, the most unusual interpretations! They will show too, that my brief comments were designed to suggest that some of us objected to having a new and unattractive code of morals and religion thrust officially upon us. Because of these challenging complaints, however, I now find it necessary to write in greater detail in order to furnish the reasons for my comments and to point out what I believe to be some very grave editorial errors.

Before taking up that task there remain some other matters which have been left over from the reply of the November issue. With no effort at undue emphasis, but, if the argument must proceed, I wish to be plainly understood and I may assure the Editor that I also am trying to make "a serious contribution to a serious problem", that I am as much opposed to the ravages of venereal disease and the bacteria which he finds upon so many marriage contracts, as anyone can be; that, in all probability I suffer neither more nor less than the average person from "prejudice and foregone conclusions"; *but*, that I base my conclusions concerning moral and religious matters on what I believe to be sound Christian doctrine and not on expediency and that I am not yet willing to "jettison" any ideas which have the authority of that school behind them. The BULLETIN does not often concern itself with moral and religious questions but in this instance such matters have been raised by the Editor in a very definite manner. He suggests that they should be left to "the Church and the home". I shall not approach them from the scientific side. I do not presume to speak for any Church. As I survey the field, it is, indeed, upon the home that much of the weight of this problem must fall and so it is from that sanctuary, the Christian Home, that I ask for the privilege of a reply.

In the original editorial it was proposed to make "the world safe for fornication. That's exactly it!" In view of the size of the order I think that I am justified in including the "reproductive act" in that then guaranteed process. The "Sin element" is introduced in its relations to the *illicit* gratification of "one of the most fundamental urges that the Creator implanted". On this point the Editor certainly appears to question the proposition that such illicit acts will be regarded as acts of Sin. In a subsequent paragraph, re the alleged attitude of "chaplains", the illicit act is again touched upon but there it is modified to the "reproductive act". These chaplains, I take it, were faced with the problem of overlooking both *fornication and adultery*, not lawful reproduction or lawful "reproductive acts". Nevertheless in this paragraph the Editor at least partially describes those unlawful proposals as "fulfilling of the law" and couples with this the "untold harm" that has resulted from linking "the sexual with the idea of wrong". There is more in this paragraph that even loose logic would reject but I shall not follow that phase of it further. However, since the chaplains are not here to defend their alleged faults, may I make one suggestion in their favour? Perhaps they feared that a "huge proportion" of the army *might indeed* be sent to hospital

should they be stampeded from their ordained duties on the matters confronting them! I suppose too that the chaplains were all Christian and that, along with their unanimity on the sex problem are features that I do not overlook.

None of us are qualified to "pass judgment" on the sin element but all of us have the right, and I think, the duty to order our convictions and our lives on the authority which we have available on these moral questions. That authority proceeds from the very highest sources and there is little chance to misinterpret its pronouncements as I think the Editor, unwittingly, has done. In the above matters he appears to me to be in danger of compromising or attempting to compromise with issues that have never and can never be harmonized with even approximate safety. The above is as I am compelled to interpret the editorial attitude. My own convictions have brought me to very different conclusions. I shall proceed to record them, commenting on occasion upon other matters presented in the editorial, to which also I object.

It may all be a matter of temperament, internal glands, or heredity—I do not know but I have no such complacent ideas on the sin element as has the Editor. Sin is by no means a light problem. It is varied but it is real. In genesis it is "original" as well as "acquired". It appears to be omnipresent and very persistent—and there are many other beliefs, concerning the nature, the importance and the effect of sin, that I do not need to present but, perhaps, a few words on the history of the concept itself will be in order.

From the dimmest ages of the past the mystery and the might of sin has baffled mankind. I doubt if the present era will solve the problem. All Christian philosophers, saints and apostles and their Master had no doubt of the reality of sin. Ages before their time Light and Darkness, Ahriman and Ohriman, Good and Evil, all of cosmic degree, entered into the beliefs of men and women and contended there for the mastery, just as I think they will contend, until the perfect light of a more than earthly sun comes pouring up in the East.

Many other concepts of far reaching effect had their origin in the gray dawn of the human intellect. Already heresies were asserting themselves! The earliest recorded of these, with which I am familiar, was that one which in essence promised "*Safety in wrong doing*". The primal innocence or ignorance of all mankind was seduced and betrayed by that faithless promise "Ye shall not die but become as gods".

In a philosophic sense that "little affair" in the Garden had much more in it than is sometimes realized nor was its significance so very much diminished when Simpson discovered chloroform or even with the evolution of nembital or paraldehyde. In the above sense, certainly, and perhaps too in a more literal way it rang true to the intellect of John Milton—he "whose soul was like a star and dwelt apart"—and about this theme, "Man's first disobedience and the fruit of that forbidden tree", he composed one of the noblest and most highly moral and intellectual epics ever written or ever likely to be written. John Milton made rigid distinction in that epic between lawful and unlawful sex gratification and had completely uncompromising attitudes on the latter. "Paradise Lost" has been styled "the epic of the Puritan cause" and some modern moralists have so distorted the Puritan attitude as to make it almost a term of reproach. While the facts do not warrant it, still, as a concession to these critics we shall look elsewhere to find confirmation or support of the Puritan belief,

Dante lived three hundred and fifty years before Milton. He certainly could not be called "Puritanical" or "A Puritan" by anyone! In his "Divine Comedy" he "condensed all the wisdom of his own age and summed up all the finest spirit of the ages that had gone before him". In what he conceived to be his mission in life, Dante did not find it necessary to separate the moral from the social aspects of his problem, but "terribly in earnest", so my authority reads, he *combined them*. Well within the hopeless confines of his "Inferno" he found many souls whom he recorded—

"..... to this torment sad
The carnal sinners are condemned in whom
Reason by lust is swayed."

Most significantly too, Dante found souls of the same nature in his "Purgatory". They had, while in life, as I understand the matter, discovered or been persuaded of the better way and were on the road of Expiation which leadeth to Salvation.

I have no quarrel with the thesis that disease should be prevented by all known means but with the editorial tone and interpretation of many of the ethical, moral and religious issues involved in the sex and venereal disease problem I do not agree.

An illicit sex act, as the term is ordinarily understood, is "fornication" and, unless all Christian teaching is wrong, fornication is Sin. Christian dogma goes farther than that. It affirms what the editorial appears at least partially to deny! The Head of the Church knew and taught that suffering must follow sin, and I do not believe that He made close distinction between the pain of a broken body or that of a broken heart. With infinite sadness He wept at the doom which He saw o'er the City of David. He knew the merciless might of pagan Rome, and of the burning hatred which his Jewish countrymen had for that nation, He was not ignorant. How long could these two systems avoid a conflict! He did not say so but I think, too, He foresaw in no uncertain way, the hostile legions encamped without the wall, the traitorous conduct and fierce passions of contending factions within. Did any thought I wonder come to Him of the slaughter and the agony, both mental and physical, that must descend on that doomed city before the score was paid? We shall never know. All that has come down to us is that heart broken cry "O, Jerusalem, Jerusalem" and, of the Temple of Solomon, "There shall not one stone be left"; He said also "The wicked shall go away" and, more sternly I think (for their doom would then be sealed). He predicts that final command to all the wicked "Depart from me. . . I never knew you". Let us not forget that Jesus Christ could be stern and on more than one occasion He was and that too with a wrath that made all sinful things flee before Him. He prohibited divorce "excepting for fornication"; *not* in extenuation, *not* as some kind of an emollient to the too guilty conscience, as the editorial suggests, but as a warning of the danger of that particular offence, He points out "He that looketh upon a woman to lust after her" is an adulterer. Can anyone doubt that He knew fornication to be a deadly sin and that the price of sin must be paid? If there was any doubt in His mind of the latter necessity then in truth "we are of all people the most miserable" and the scene on Calvary was without meaning. Excepting for the avenue of escape provided by an Infinitely Merciful God and made apparent in the life and deeds of His Son, Mankind for fornication alone might universally be damned. That avenue

of escape can never come through prophylactic ointments, applications and administrations of "scientific" origin alone but in a higher sphere of achievement it is indicated by the blessing bestowed upon those, who, in the purity of their hearts, might expect to see God.

Pauline philosophy is no less uncertain in its belief of the sin involved in illicit sex acts. "A fornicator sins against his own body" and at such desecration Paul exclaims "What! Know he not that your bodies are Holy Temples and God Himself dwelleth in them!" The editorial quotes that verse of highly moral advice which Paul gave to the Philippians, but not I am sure in the sense that Paul meant. (Like most of its other interpretations of the moral law, the editorial rendering of that verse is too indefinite. There is nothing of the conviction or the force of St. Paul in it! Paul was urging the Philippians to "think on" and practise all those virtues in their own lives. "Whatsoever things are pure" is centrally placed in that verse in the King James version of the Bible whereas the editorial quotation omits it altogether! And yet it was, of the whole verse, the piece of advice most pertinent to the matter that the editor was discussing.)

In the earlier centuries of the Christian Church there was no doubt on this point. Some at least of those who aspired to especial virtue in respect to it had the belief that the sex passion should be resisted and controlled by the individual, him or herself. This was in fact the plainest of Christian doctrine and they loyally tried to follow that precept. Augustine, the greatest of the Church Fathers, wrestled in untold agony with the problem in his own life and finally, let it be known, he subdued it. In his notable chapters on the Early Christian Church, Gibbon relates how other devoted men and women of that same period hoped to gain the mastery. Through all the confusion of the Dark Ages of Europe that belief in the virtue of Purity and Chastity was retained with iron determination. In monasteries and nunneries it was kept alive when all without was in chaos. It was given prominent place in the Orders of Chivalry and through all periods down to the present it has been accepted without question as an outstanding part of the Christian code, though what we may do with it in our time remains to be seen.

In recent years a most outstanding advocate of the virtue of Purity is His Holiness, the Pope, whose words the world has read and heard in strong denunciation of the growing immorality of the times. I am a Protestant. I have no regrets for the iron creed that Calvin fashioned from pre-existing beliefs and Knox instilled into the hearts of my ancestors but I am not so forgetful of beliefs held in common or so careless of the teachings that all creeds and churches must follow but that, when I see the Head of that great Christian Church lifting his hands against this and other evils, I can devoutly pray "May God bless him and give him strength".

The Hebrews saw the evil of uncontrolled sex long before the Christian era. They saw it in themselves and in the nations about them. Baal and Ashtaroth, the Phallic worshippers and other pagan deities—their accursed groves and high places, their orgies of bestial lust. At one time of especial disgrace in Hebrew history, in a time when there was no moral authority in control and "every man did that which was right in his own eyes" these evils were practised in the Temple itself. Ezekial saw them there and declared "I went in and beheld the abominations of the wicked".

Physical punishment for sin may be a "regrettable" belief, but as I read the Old Testament many of the "burdens" set forth in the prophecy of Isaiah

were descriptive of that very thing. Against one after another of the corrupt cities and civilizations of his time, Isaiah pronounced prophecies of doom and one after another they were destroyed, not because of the prophecies of Isaiah but because from that high "Valley of vision", in which he lived, that stern old moralist could see the seeds of death even then springing up in their innermost citadels. Isaiah had no doubt that punishment must follow sin and the numerous city mounds that dot the plains and valleys of those Eastern countries to-day furnish reasonable evidence to us that he was not very far astray.

And so as I read and interpret the history of this question the following lines of thought are noted. The pagan of thousands of years ago felt the power of the sex passion strong within him. Marvelling greatly or for other reasons that we of to-day cannot know, but with no better light than his times could afford, he deified and worshipped it, in that attitude being not too far removed from some moderns who ascribe to it the mainspring effect on all human behaviour! The Hebrew saw its destructive and evil aspects. He attempted to control it largely it seems by setting forth national laws which he believed to be of sacred origin and over all he imposed the vigilant watch of a jealous and wrathful Jehovah. Marriage within his own race no doubt had its effect in preventing contamination from foreign sources. The Christian had new light given to him. He too was convinced of the sin and evil but he placed the responsibility directly on the individual. I doubt if it ever occurred to him that a God in mockery had imposed an impossible task on his too earthly shoulders. He saw that he had a duty to perform—a duty to himself and others—and there I think the major part of the matter still rests. The facts of syphilis insontium and congenital disease of venereal origin cannot remove the individual responsibility for the performance of that duty. "The sins of the fathers" and the sins of those who will become fathers or mothers cannot be so easily evaded! There *is* law and order and effect follows cause through all the universe and beyond. The multitudinous suns rise and set and their planets pursue their courses in the unknowable limits of space, terrific in speed and might, but all in majestic harmony and in accordance with Law which must be both Infinite and Divine! Permeating this law there is strength. A little more strength in our own moral code, much more reverence, much *less* weak kneed sentimentality, indifference and cynicism in modern thought would do more to control and banish the social diseases than all that the preventive measures of scientific medicine and the compulsive enactments of a soulless "State" combined, can ever hope to do. Preventive measures are good. Legislation through the conviction and consent of the majority is good, but these should never be divorced from the more effective measures of preventive moral thought.

The editorial dwells upon "fear" (i.e. fear of consequences) as a doubtfully legitimate moral force. What part this instinct or emotion (it is not all "Instinct") has played or should play in determining human conduct is another great question. It cannot be dismissed by any such references as "Syphilis and gonorrhoea are pillars of morality". The Scriptures say "The fear of God is the beginning of wisdom"; "Fear God and keep His commandments"; "Fear God"; "It is a fearful thing to fall into the hands of the living God." I do not know the exact meaning that the teachers of the Bible attached to the "fear" which they advocated. It certainly was not the wild unreason-

ing instinct of a hunted animal, but at the very least they must have meant a prudent respect for properly constituted Authority and Law.—A little more of that attitude, also, would not be amiss in modern society. No! Fear of consequences is not to be laughed at as a moral force. It has millions of times saved people from shame and disgrace. Combined with more decision in international affairs, it may yet prevent Godless forces from hurling this world into the pit of destruction.

Neither can I agree that there should be no difference in our attitude towards the genesis of disease. Nearly thirty years in practice has not yet convinced me that venereal infection by innocent or lawful contact is anything so common as some writers would have us to believe. By many times over the numbers of patients, having venereal disease, whom I have seen, came to grief through illicit intercourse. In practically all of these, in either the one or the other of the partners, and very often in both, the moral issues were outstanding and were the real stumbling blocks.

Venereal infection by innocent and lawful contact does occur and furnishes some of the most tragic and pathetic situations with which physicians and surgeons have to deal. Even then the question is relevant "Who was guilty?" Only a few times in my experience have I known of venereal disease having been contracted by other than sexual contact and in practically all of those cases where the victim was an innocent young wife, a new born baby or a case of congenital syphilis, the origin of the disease could be traced to a guilty husband or, in the case of children, to one or other of the parents. I know all about the "housemaid" problem and the epidemics that have taken place in nurseries. The answer is the same. The guilty party did live or is living only one door step further away.

Let young men and women, boys and girls, be well informed and taught to think soberly on these stern facts rather than to rely on the essentially immoral hope that they may safely indulge in illicit intercourse! There is far too much of that sort of thing already. We may not be able to prevent but we should see well to it that no doctrine or attitude of ours will increase it. It may be that, regardless of morals, the best we can do is to offer an application or an appliance but I do not think so. Neither do I care to see the BULLETIN enlisted in that isolated enterprise.

It is not known "how much sin" any given individual "could stand". That depends upon a Judgment which has not yet been delivered to any of the living but I am convinced that a dubious freedom from venereal disease, alone, will never save any social system from destruction, should that society adopt "safe fornication" as a rule of life on any comprehensive plan. I see many complications to such a doctrine that have not so far been mentioned. After all venereal disease is an *accidental* result, almost invariably of the sex act. The Editor has forgotten the *natural* results! Shall we make them all safe? Illicit intercourse on our guarantee? Unlawful contraception on our advice? Criminal abortion with our curettes? When making a serious journey one should know where he is going before he starts out. In this matter I am somewhat of a pessimist. As surely as we guarantee the "leader" we shall have to meet the others of that filthy crew and, as I should suspect, all too often on terms that the leader himself will dictate. I have not drawn a new picture. Society has faced this problem many times and whole States have suffered from its baneful effects. Society and physicians together and perhaps others are facing it right now in this and many other countries and no one knows where

the end will be. It does not look like a happy voyage to me! That in all its moral essentials was the route that Soviet Russia took and as I read current events even that State soon found the results beyond its power to endure.

The quotation "It ill behooves any of us to talk about the rest of us" is good advice and quite correct in its proper setting. It does not apply to the physicians in his relation to the personal problems of practice for no physician worthy of the name "talks about" or divulges the knowledge he has gained from his patient. Even the pagan physician understood and insisted upon the importance of that attitude. As physicians alone it is not in our province to condemn or to condone, but as men and women we should not be asked to adopt towards Purity and Honour the same attitude that we must feel against lust and disgrace. I know Thomas Hood's God-like plea in his "Bridge of Sighs"—

"Touch her not scornfully
Think of her mournfully."

but back of the pitiful dead body of that young woman there was indifference and immorality and shame. Much more sinned against than sinning I think she was but there is a better road than the one she followed and it is our duty to urge and advise the better way. "Was she a mother? Had she a brother?" the poet asks and the answer of The Christ comes ringing down the centuries "Behold my mother (my sisters) and my brethren", but, defiled in body and soul and bereft of hope, she took the short cut over the parapet as thousands of her sisters have done and will do who travel that road. We physicians who know more, perhaps, than any other class in the community of the dangers of illicit intercourse and the ravages of venereal disease, have we no greater duty, nothing better to offer than appliances of physical safety? We have example and authority and as I believe we have command for a further duty from Christ Himself—"Go, thou, and sin no more".

Here are two pictures which may be applied to the "goodness" or the "badness" of disease. For me they enlighten the whole moral horizon as with a lightning flash—

"A picket frozen on duty
A mother starved for her brood

The millions that humble and nameless
The strait hard path have trod
Some call it Consecration
And others say it is God."

Such consecration, oft times the real cause of death dealing disease, is found only on the upward way. We dare not be indifferent to that!

The Apostle Paul has drawn my second picture. He speaks plainly. His first words indicate that he is striving to win his hearers from some vicious and well organized system of thought—"Be not deceived! Neither fornicators, nor idolators, nor effeminate, nor abusers of themselves with mankind shall inherit the Kingdom". Centuries before Paul's time these things had been definitely charted in the moral order—

"I discerned a young man void of understanding
 And he went his way to her house
 In the twilight in the black and dark night—
 But her house is the way to hell
 Going down to the chambers of death."

The verse immediately above is from the Old Testament and I realize quite well that many of the sterner and unmerciful tenets of that portion of the Bible have been discarded or greatly modified in modern thought. All Christians I think will agree that this should be so but on the guilt involved in illicit sex acts both the Old and the New Testaments seem to me to be in accord and I believe that moral code will endure while Time lasts.

And finally I believe that the physician has a much greater responsibility in the attitude which he adopts towards the complications and the abuses of the sex instinct than has the average citizen. His power for good and his opportunities for the same are equal to those of any clergyman. When confronted with any sickness or disease, the physician has other opportunities and duties than those belonging only to the physical realm. If he can he must treat the personality as well as the disease. How often we must warn and advise, sometimes plead, sometimes even dominate in realms where no knife or drug can ever enter! And this we do always in manner and substance calculated to guide the patient away from folly and error. Shall we do less for the victims of the sex problem? Shall we give to them short measure in a dubious container or, in a clear glass, the best that we have?

May God help us all! Is this fuller draught possible or is it all but as the memory of a dream that is past?

Once, long ago, there was a very sacred vessel. It had touched the lips of the Saviour of Mankind but through storm and stress and doubt as to its value that vessel became lost and men saw it no more. They have searched the world for centuries but it has never been found nor does it seem that mortal man will ever again use that chalice or hold it in his hands. Only to one man, as far as my knowledge of the tradition goes, was it given to behold it. He was a man of our own race and his contribution to society was closely akin to our problem. I think he saw the chalice only in dreams and at unbelievable heights for he was a dreamer and he lived in realms to which none of us seem able to rise but, as he told the story of his search this is what he saw—

"Sometimes on lonely mountain-meres
 I find a magic bark
 I leap on board. No helmsman steers
 I float till all is dark.
 A gentle sound. An awful light!
 Three angels bear the holy Grail
 With folded feet, in stoles of white
 On sleeping wings they sail."

but always the chalice disappeared, being borne far away and mingling with the stars. I doubt if we shall see its like again for we no longer have the faith that makes such vision possible.

† The chalice was wrought as an act of devotion and it was all of the purest gold, and, though they could not fathom the depths of the draught it con-

tained, when it was on earth, men drank of it gladly for they knew that within that chalice there was Life Everlasting.

But to-day we have too much substituted our poor human reason for a God inspired Faith and we commonly fashion our vessels of glass or crystal which make but brittle containers as compared with the ductile metal. Lacking the great faith of The Elders we demand to look through the margins of our vessels. Few of us see further than the margin and no man yet has seen the centre—but look unto them we will and must and proceed to reason of the content. With what faith is left, with limited vision and very fallible reason the above is what I have seen in this matter of life, but, as I have seen, so I believe and I can say no more.

Dartmouth, Dec. 4th, 1937.

Be Practical

H. W. SCHWARTZ

IN order to avoid officially thrusting any allegedly strange views on my fellow members this is appearing outside the editorial column.

It is true Dr. Burris and I were nourished on the same cereal and struggled with the same catechism and there was little about the ten commandments with which we were not familiar. What a training in the exact handling of language. Alas! What has it profited me? I had preened myself on the crystal clearness of my composition but if I accept Dr. Burris' interpretation, it must have been a hodge podge of ambiguities. Phrases and words are taken from their context and utilized, I feel sure quite unconsciously, as to give a distorted impression of that which I had tried to convey. In one instance to the point of reversal as in his interpretation of paragraph four, page 361, November issue. Just think of him saying that I entertained such an abominable thought as that he of all men would stoop to making use of "the mantle of religion" in any but a proper way. Before discussing some points raised by my highly respected and much admired friend I will take this opportunity to thank him for directing my attention to the omission of "whatsoever things are pure" when quoting the familiar passage. I can assure him it was not intentional.

Any person unacquainted with the original article I am inclined to believe would be left with the impression that I had been advocating fornication with the vigour, enthusiasm and recklessness of a crusader, and that as for sin it was more or less of a far fetched joke. As a matter of fact, I neither advocated, recommended, nor encouraged fornication but I did say that, regrettable as it may be, this practice was, is, and probably will be. To continue to permit it to act as a channel for the dissemination of disease was wrong. The substance of the argument being that one evil is better than two, and that the sooner venereal disease is separated from its moral entanglements and treated as a public health problem of the first magnitude the better.

Had I said make the world safe for the virtuous, the innocent, the babe to be by rendering society free from venereal disease none would have rebuked me. Because I expressed the same idea in an unusual form suggesting that the practical place to begin was with protecting or rendering harmless those who spread the disease, lo! I am accused of being naughty. I have yet to learn how disease is to be permitted to run wild in one portion of a community with perfect safety to the remainder—when both parts mingle so uniformly—as is the case between the non-infected and those infected with venereal disease.

Dr. Burris leaves me with the impression that he is of the opinion that fear as a moral force has its place. It is true that fear may deter, but does it change the heart, is it ever a transforming force giving rise to "a new creature"? Fear of consequences may prevent a citizen of one city throwing anything he does not want on the sidewalk and the result is a spotless, litter free city. Citizens of another city imbued with loyalty and an appreciation of beauty anxious to make the place where their children are being reared as clean

and attractive as possible will also have a litter free and spotless city. Which do you prefer, order imposed from without or order springing up from within the result of a spiritual awakening?

The same idea may be applied to the moral sphere. To tell a young man to be "good" because otherwise he may contract disease is a wretched and degrading way of going about the matter. The approach is psychologically wrong provoking some to defiance and others to make the demoralizing discovery that they are at heart cowards. Youth, I believe, responds to ideals in a remarkable manner. Men will sacrifice their all for liberty or out of a sense of loyalty. A young man will strive for a worthwhile prize. Teach him that to be chaste is an accomplishment—something to be proud of—and you will at least be off on the right foot. Point out to him that only weaklings succumb and that to be master of his body is the real test of manhood. Obviously he cannot be a slave to lust and at the same time enjoy liberty. Tell him that duty and honour demand that he present a clean, healthy, chaste body to the woman who will bear his children. We are spiritual beings; our bodies may be linked with the rest of living matter but our spirits with the living God. Give a young man or woman a worthy objective and lofty ideals of public and private life and the end result will justify our faith.

Sin is a very real thing and by sin I mean anything that separates our spirits from God, that spirit of Love of which St. John writes. That Spirit who is infinite, eternal and unchangeable in His being, wisdom, power, holiness, justice, goodness and truth. The moral law is included in this comprehensive definition. "All we like sheep have gone astray" and most of us have suffered the agonizing bitterness of remorse and have cried with the psalmist "... my sin is ever before me. Against thee, thee only have I sinned, and done this evil in thy sight: ... Hide thy face from my sins, and blot out all mine iniquities. Create in me a clean heart, O God; and renew a right spirit within me. Cast me not away from thy presence; and take not thy Holy Spirit from me". What is to be gained by permitting to be added to the scars of the spirit scars of the body—stricture, sterility, blindness. You do not have to approve of fornication and adultery because you put forth a helping hand to a fellow man who has stumbled. How different was the attitude of the chaplains to that of our Lord when confronted by a somewhat similar situation. "When Jesus had lifted up himself, and saw none but the woman, He said unto her, Woman, where are those thine accusers? Hath no man condemned thee? She said, No man, Lord. And Jesus said unto her, Neither do I condemn thee: go, and sin no more." No one dreams that Jesus approved of adultery, but he substituted kindness in place of, "it serves you jolly well right" or "take what is coming to you" of her accusers. He hated sin but loved the sinner.

If the medical officer was wrong in treating the young soldiers six hours after exposure, it surely would be just as wrong at the end of seven hours or seven and three-quarter hours, or seventy hours or days or weeks or months. Mere denunciation of sin is not enough—something more must be done. Good must be substituted for evil—as in the Army where games and reading rooms take the place of chilly uncomfortable quarters or the streets when men are off duty.

Dr. Burriss repeatedly refers to applications or appliances. I did suggest without going into any details whatsoever the application to civil life, in so far as would be deemed practical, those procedures that have proven so suc-

cessful in the Army and Navy. Was that such a scandalous thing to do? My critic selected one (ointments and appliances) and dwells on it to the exclusion of all others. The whole business is repulsive, but which is the more so, personal prophylaxis or gonorrhoea? I hate sin but I hate sin plus disease more. I was also so rash as to recommend that the basic principle in the conquest of communicable disease, the eradication of the focus of infection, be applied.

Within a hundred miles of where I am now writing one of our members told me that this summer within a period of a few weeks he had four cases of early syphilis—three of whom were married men and all of whom contracted it from the same source. If one physician in that locality had that many, it is not improbable that his fellow practitioners had a somewhat similar experience. Should that focus be rendered non-infective or not?—that IS the question. If you do, you will be making fornication safe. If you do not, disease will be spread, the innocent suffer and possibly be destroyed, perhaps involving one dear to you. Which is the more grievous and shocking offence? You must either enlist in the ranks of preventive medicine or those of disease: “. . . choose you this day whom ye will serve.”

Let us refresh and encourage one another by turning to Sweden, one of, if not, the most cultured states of Europe and see what has been accomplished. Syphilis has become so rare a disease that the medical schools have difficulty to secure early cases for teaching purposes. Dr. Einar Rietz, Commissioner of Health, Stockholm, writes in the American Journal of Public Health, April, 1936, “we have successfully applied to the combating of the venereal diseases the experience and principles gained in epidemiology, medicine and public health administration”; and Dr. Parran, Surgeon General of the United States Public Health Service refers to the progress made in that land after personal investigation as a “modern miracle”.

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and the Secretaries of Local Societies

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

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No. 12

AS the present year is drawing to a close and the New Year with all its new resolutions and fresh aspirations will soon be with us, I would like, through this last issue of the present year, to make an appeal to all members of our profession in the Province of Nova Scotia for an increase in our membership.

Why not make our Society one hundred percent? There is ample inducement for this. At the present time the conjoint fee of Fifteen Dollars gives us membership in the Medical Society of Nova Scotia, also in the Canadian Medical Association. With that we have the NOVA SCOTIA MEDICAL BULLETIN and the *Canadian Medical Journal*, both excellent publications.

The Canadian Medical Association has taken an active interest in Medical Relief and Public Health Insurance, and at the sitting of the Rowell Royal Commission Dr. Routley will be present to represent the interests of the Association.

In unity there is strength. Let us increase our strength by increasing membership.

In June the Canadian Medical Association meets in Halifax, where outstanding men from Canada, the United States and England will be present, and an excellent and instructive program will be presented.

As members of the Medical profession in Nova Scotia, we are the host of the Canadian Medical Association and visitors. Nova Scotia has never lacked in its hospitality, and as considerable expense will be incurred in connection with this gathering, we have to look for financial assistance to our membership, and I feel sure our executive will not be disappointed.

As the old year draws to a close, I would like to extend to the members of our profession a Happy Christmas and hopes for a New Year with fewer worries and lightened cares.

A. C.

FROM time to time the attention of the editors is directed to what is believed to be a failure in not having made any reference to certain births, deaths, marriages, journeys, honours, and such like matters as the members of our Society expect, and rightly expect to appear under the section devoted to Personal Interest Notes. We would in explanation point out that there is no way for us to know unless we are told. This office does its best to scrutinize such newspapers as see fit to exchange with us, but many do not, and in consequence our source of knowledge is limited. Even as it is days and sometimes weeks may pass without an opportunity presenting to attend to the newspapers received. Such, you will agree, is anything but a satisfactory method of news gathering and permanent recording of matters of this kind.

The onus of keeping this section complete and up-to-date rests on you in the first instance. If an event occurs in your family which you would like to have mentioned in this Journal yours is the responsibility to see that an accurate account reaches this office. The secretary of your local branch is one of the editors by virtue of his position. We would not be guilty of suggesting that your local editor so far forget his dignity as to turn reporter. No indeed. But one would suggest that a person so familiar with the local "goings-on" as your secretary should be required by the local branch to act as your official newsgatherer. Thus the editor and the reporter could, and one feels sure would, work together with the greatest of goodwill. The editor would, of course, have his difficulties because of congenital weakness peculiar to reporters, but then office and responsibility are inseparable and rigid discipline must be enforced regardless of personal feelings. Their intimate knowledge of one another and their mutual admiration would probably be sufficiently thorough and overpowering to avoid any untoward incident. The reporter having presented the results of his labour before the editor, who in turn, exercising his prerogative would decide which of the many items submitted were suitable to be forwarded for publication. In order to have and share a sufficient knowledge of these intimate matters some orderly newsgathering arrangements are essential. We would urge that a branch system be substituted at the earliest possible moment in place of the present central higgledy-piggledy catch as catch can.

The editors wish to take this opportunity of wishing all our readers a very happy and carefree Christmas and that the New Year be one that you will be able to look back upon with joy and satisfaction.

H. W. S.

CANCER SECTION

CONCERNING CANCER

ARTICLE I

GEORGE H. MURPHY

THE writer of this article, and similar ones to follow in subsequent numbers of the BULLETIN, wishes to give a brief preview of their character and purpose. He wants, first, to make it clear that he is not writing in any official capacity, or as an advocate for one plan or system suggested or urged for the control of this disease. He writes only as a doctor of Nova Scotia, with a goodly number of decades in practice, and some experience in public health, to help guide his judgment. He believes the time is come when the public expects the medical profession to show what it has to give in the way of better things for the cure and control of cancer; and he is emphatic in the assertion, that the policy adopted for this province should be one of our own making, modelled and detailed so as to fit in with what we already have in the way of organizations—workable and sane. That we might find it proper to become part of a Dominion wide policy in no way frees us of the obligation of first deciding what is best for Nova Scotia.

The writer believes, too, that we are on the edge of a new order of things, in which the interests of the medical profession will be greatly involved. We must see to it that any change in the business and professional relations now existing between doctor and patient, between medical service and the public, shall obtain only with approval of our profession, founded on study of the essential character of the proposed innovations, and an intimate and practical consideration of their adjustment to our own practices and traditions in this province. It is suggested right here that a more or less hurried vote at an annual meeting on a matter of professional policy is of little real value, unless ample time, pertinent discussion and a frank showing of all the facts precede the final decision.

With these preparatory thoughts I wish now to briefly discuss the first topic of the cancer problem, that of *organization*.

Some weeks ago, we had a visit, in Halifax, from Dr. McEachern of Calgary. He is a past president of the Canadian Medical Association, and a member of the board of trustees of the King George V. Cancer Fund. He came to us as a Canadian Medical Association delegate, and as many of us as had an opportunity, listened with interest to what he had to say; no one could have his subject more at heart than this keen, discerning doctor from the West.

Dr. McEachern told us the trustees of the King George V. Cancer Fund had been in conference with officials of the Canadian Medical Association as to the way of using the Fund in order to best serve the purpose on which the public appeal was made, and which realized something over four hundred thousand dollars. The officials of the Canadian Medical Association approached entered into a more or less tentative agreement, we understood, with the Fund trustees to undertake an organization of the citizenship of Canada in a cancer campaign. The trustees would give over the income on the Fund for one year, at least,

to help form the organization. No part of the Fund capital would be made available for this work. It was not made clear whether there would be any capital outlay for any purpose, or if there were, what form it would take.

Dr. McEachern produced a map, or graph, showing the scheme of organization in the provinces. The central control unit would be at Toronto, and this body would, in the descending order, be linked up with central committees, or units, for each province. These central provincial units would, in turn, be linked with all present existing clubs, women's organizations, church fraternities, etc., and all these together would reach out to every man and woman in our Dominion. A big membership would thus be enrolled, and a membership fee of about one dollar would produce a revenue sufficient to pay operating costs of the organization, and also the initial expense of its formation. It was possible, he said, that five hundred dollars or so, might be available from the Federal central unit to help in this latter cost, but he could not be positive on this point. What particular form this giant organized body would assume to attack the cancer problem was not discussed, and so for the present we need not spend time on it.

It ought to be emphasized that Dr. McEachern submitted only a tentative plan; or at least, this is the impression we received. No one will question the fine idealism of the proposals outlined; not one of us but desires their fulfilment, but we are living in a practical, workaday world and the highest ideals can be transformed into reality only by building with what material and tools we can command. And so I submit to the doctors of this province the following considerations, not by way of opposition, but as matters that must be thought out before the suggested structure can be built to proportional and useful heights:

In Nova Scotia, what organization for cancer control would be most efficient?

1. One headed by the Canadian Medical Association.
2. One headed by the Provincial Department of Health.
3. One in which both the Canadian Medical Association and Provincial Departments of Health combine.

If such an organization as Dr. McEachern proposes is accepted in principle, and assuming our profession should lead the way, can we do the work without engaging a salaried organizer to go over the province for a period of from three to six months?

How much funds would we need for the whole job of organization?
How are such funds to be raised?

What is the judgment of Nova Scotia doctors on a suggested proposition that, if necessary, the entire funds of the King George V. collection might best be spent in organization?

With so limited an endowment, is it wise to spend any of it on cancer research?

Next month I shall try, in Article II, to discuss—

1. What is cancer control?
2. What are its relations (a) to our profession, (b) to the public?

Society Meetings

Western Nova Scotia Medical Society

The Regular Fall Meeting of the Western Nova Scotia Medical Society was held in the form of a Dinner-Meeting at the Grand Hotel, Yarmouth, on November 10th at 8.00 p.m. Due to the unavoidable absence of the president, Dr. A. B. Campbell, the chair was taken by Dr. L. M. Morton, Yarmouth. Guest speakers were Drs. Victor Mader, F.R.C.S. Halifax and J. Earle Hiltz of the N. S. Sanitorium, Kentville.

Dr. Mader's paper was entitled "Lung Abscess, Its Complications and Treatment" and was illustrated with films showing the various stages of abscess formation in the lungs. This paper was thoroughly enjoyed and proved most instructive.

Dr. Hiltz's paper was entitled "The Office Diagnosis of Pulmonary Tuberculosis". Dr. Hiltz emphasized the value of examining all contacts for signs of active Tuberculous disease. A general discussion and many questions followed both papers in which most of the members joined.

The following resolutions were moved, seconded and unanimously adopted:

- (1) "*Be it resolved* that our Society go on record as approving the very splendid work done by the travelling Tuberculosis Clinic in our midst by helping to eradicate Tuberculosis."
- (2) "*Resolved* that our Society go on record as being in favour of the Tuberculin testing of cattle as a health measure in eradicating Bovine Tuberculosis."

A vote of thanks to the guest speakers was moved and carried.

T. A. LEBBETTER,

Sec'y-Treas. Western N. S. Medical Society.

Colchester-East Hants Medical Society

On October 19th the semi-annual meeting of the Colchester-East Hants Medical Society was held in the Scotia Hotel at Truro.

Dinner was served at six-thirty after which the business and scientific programme was held.

Dr. Kenneth MacKenzie of Halifax was the chief speaker dealing with the subject "Blood Pressure". Dr. MacKenzie gave a very practical talk on this subject limiting his remarks to the clinical aspect of blood pressure as seen and dealt with daily.

The general management of the case was discussed. Create an atmosphere of confidence and assurance rather than one of alarm and resulting neurosis. Drugs, removal of focal infections, less physical activity, a lower rate of living and a suitable diet containing at least seventy grams of protein for the body need were all advocated as aids in the treatment.

Dr. Archibald, neuropsychiatrist from Ottawa, accompanied Dr. MacKenzie and spoke briefly on blood pressure from the neurotic side.

Discussion was freely entered into by Dr. D. L. MacKinnon, Dr. W. R. Dunbar and Dr. D. S. McCurdy.

The following resolution was passed by the Society:

"That Colchester-East Hants Medical Society forward a resolution to our representative, Dr. J. B. Reid, also to the chairman, Dr. H. K. MacDonald, of the Advisory Committee from the N. S. Medical Society to the Workmen's Compensation Board, stating that the present mileage rate of 50c per mile, after the first two miles (for which no rate is paid) is unsatisfactory; and that this Advisory Committee use every effort to have the original rate of 75c per mile again paid."

Abstracts from Current Journals

MEDICINE

Pulmonary Tuberculosis in Children. September issue *Edinburgh Medical Journal*, by Drs. MacGregor and Alexander.

The writers stress the importance of the lungs as a portal of entry for Tuberculosis in childhood and while not clinically manifesting itself in the lung showed at autopsy to be the portal of entry in 70% of tubercular deaths at the Royal Edinburgh Hospital for Children. The source of infection is a human one and the major problem of control in children is the human source and that the bovine is of secondary importance.

Childhood type of Tuberculosis is the "first infection" type characterized by the inconspicuous character of the lung lesion, the severe involvement of the lymphatic system and the tendency to extensive spread of infection by the blood stream. Adult tuberculosis is not due to childhood infection but to a later re-infection and differs from the childhood type by its tendency to chronic progressive destruction of lung with minimal lymphatic involvement. The primary lesion in children has a marked tendency to heal and the areas are quickly surrounded by granulation tissue with fibrous tissue formation but in the early active and therefore dangerous stage the Tubercular lesion is not detectable by X-Ray or clinical signs. Several patients dying with meningitis showed no X-Ray or clinical evidence of pulmary tuberculosis, but post-mortem a well marked early lesion.

F. J. M.

The Role of Contact Examination in the Control of Tuberculosis.
Dr. Pope—*The New England Journal of Medicine*.

The writer points out that while during the past twenty-five years the death rate from pulmonary tuberculosis has decreased 75%, the mortality rate in Sanitoriums has not shown a remarkable change. One of the main causes of this is due to late diagnosis, sixty to seventy percent of admissions being in an advanced stage. The mortality rate in the minimal stage is 17% compared to 70 to 80 percent in advanced cases. The examination of contacts of all tubercular patients will, the writer believes, greatly increase the number of minimal cases coming under treatment.

In several large sanitoriums a tubercular contact rate of 76 per thousand was found, while surveys in the large state population has been about three per thousand.

It is therefore suggested that all child contacts be Tuberculin tested and positive reactors X-Rayed. All adult contacts X-Rayed and rechecked every year. This would reduce the number of open advanced cases which are the spreaders and thereby quickly reduce that still very large group of contacts.

F. J. M.

Collapse Treatment in the Treatment of Pulmonary Tuberculosis.

Dr. Wilson—*The New England Journal of Medicine.*

The author reviews the treatment of pulmonary tuberculosis by the various methods of collapse at the Worchester Sanatorium. Collapse Therapy by reducing the tension and trauma due to respiration allows retraction of scar tissue and closure of the cavities. Rest and general treatment should not be omitted. Every patient is a candidate for collapse therapy but early cases progressing with rest treatment, and all patients with cavity formation should if possible receive benefits of collapse. Early cases should not be allowed to progress to cavity formation before resorting to collapse, but frequent X-Ray examination should be made regardless of the clinical progress. Patients may show gain in weight and freedom from symptoms with a spreading lesion.

The early disappearance of Tbc. Bacillus from sputum lessening the danger to patient and others and the lessened period of Sanatorium treatment as well as the decreased mortality are the advantages of collapse therapy. The disadvantages are formation of fluid with danger of tuberculous empyema, damage to lung from collapse resulting in only partial re-expansion, and the administering of air every two to four weeks for two to five years. The ability of sixty-six percent of re-expanded cases to return to work and of satisfactory collapse in thirty-five percent of cases of phrenic interruption regardless of the situation of the cavity, show the result that can be obtained in the two minor procedures of artificial pneumothorax and phrenic interruption.

F. J. M.

Administration of Fluids, Dr. H. L. Marriott.—*The Practitioner.*

The author stresses the importance of maintaining the water balance and the early recognition of dehydration which may occur in any patient due to reduced intake or increased output of fluids. To prevent dehydration a daily intake of 3500 cc is required. This amount must be increased when there is abnormal loss of body fluid. The urinary output should not be allowed to fall below 600 cc and a daily output of 1200 to 1800 should be maintained. In severe cases of dehydration as much as 7 litres should be administered. The symptoms of dry tongue and mouth and loss of tissue elasticity should always be carefully looked for. In the administration of fluids rectally the use of a large tube with no constriction between rectal nozzle and reservoir and the maintenance of a low pressure of six to fifteen inches are important.

F. J. M.

Book Review

THE CITADEL

FOR many weeks "The Citadel", by A. J. Cronin, has been more widely read than any other work of contemporary fiction. Enthusiastic reviews, testimonials from many persons interested in the book, trade and jacket advertisements proclaim that this is a great novel and a searching criticism of the medical profession. It is neither.

To one who has read with delight "The Stars Look Down" this much publicized pamphlet comes as a distinct disappointment. In the earlier book, first class minor novel, the author has told a good story well. We are carried along by the swift pace, fascinated by the author's skill in successfully dramatising the complicated plot. The fate of Arthur Barras is described with bitter irony, the pathetic story of the worthless Jenny is deeply moving. Only when we come to the incredible Joe Gowlan do we find the author approaching melodrama. Joe is too black and much too uniformly successful. But once taken up "The Stars Look Down" was a hard book to lay down unfinished.

"The Citadel" on the other hand is a surprise for those who have felt that Dr. Cronin could write well. The style in this book is quite dull, the descriptive passages fail to convey atmosphere, the dialogue is monotonal in keeping with a somewhat dogged uniformity of emotional content. The plot in outline suggests comparison with "Arrowsmith" but here the similarity ends. Sinclair Lewis writes vividly, his prose sparkles with the zest of life. His eccentric characters may be caricatures but they are never animated cartoons. His brave young Quixote is drawn with the startling fidelity of portraiture: he has a sense of humor, knows when to be kind, and is acquainted with the meaning of loyalty. Lewis builds his novel around his problem, the black and white of ethical values is seen against a background of real people, somewhat indistinctly, as in life.

But "The Citadel" is unrelieved black and white as all propaganda must be. Of course the author's motives are quite sincere. His moral earnestness is entirely obvious, in fact impressive. But in art good intentions are not enough. Corki or Briffault, sustained by stout proletarian disapproval of bourgeois decadence, can write powerfully in this vein. But Cronin wrote much better when not so thoroughly indignant.

Andrew Manson is the most uncompromising jackass in modern literature. He never seems to know what he wants and we may be sure by the trivial end result of his bungling that he will never get it. At his best he is an unpleasant prig, at his worst, a snivelling toady. How Christine, a treasure of a wife by all accounts, could have stood him is a point that is not made very clear. His treatment of her is so wretched that we do not wonder that she is so flatly and colorlessly drawn. A woman of spirit would have terminated Andrew and the story in the early chapters.

Some excuse may be found for Dr. Manson's lack of restraint (though not for that of the author) when we meet his associates. It is safe to say that such an uninspiring crew of blubbering morons has not been assembled between the covers of a book since Moliere with mordant pen pricked the bubble of 17th century medical pride, fat with many absurdities. But we are told that this

is a novel, not satiric comedy drama; and the novel is supposed to be a serious criticism of life, not a comic strip. Careful search is needed to find a single sympathetic character in the book. Abby an "obliging pot" is interested but the author will not allow us to know him well. Llewellyn and Thoroughgood are conceived in malice and we can see them only with the myopic vision of Andrew Manson. For the rest, one should try to read the book. Perhaps after all it is not so hard to forgive Andrew for his sophomoric ranting and Philip for his cheap cynicism. But it is not easy to forgive his clumsy loutishness, his tiresome cant and his self pity. We can credit him with blowing up the sewer (which after all was Philip's idea) and with a somewhat solid piece of research work. That is all. His bleating soon becomes monotonous. His crisis somehow fails to move us. We take leave of this 20th. century would-be Hunter without regret.

Now the public is taking this gallery of fools seriously. Many people guided by the instinct which leads them to accept as infallible anything that they see in print and it may be with some unfortunate experience with doctors in the back of their minds, are hailing this sad and trivial book with joy. So it may not be amiss to point out that Dr. Cronin has failed to give us a serious criticism of organised medicine as signally as he has failed to evolve a significant work of art. Surely the author is aware that the pack of profit hungry cut-purses which are found in every city and which he has seen fit to describe in this book will be taken to represent the medical profession as a whole. If they are not it will not be due to any oversight on the part of those whose business it is to keep "The Citadel" in the very front rank of best sellers.

The need for criticism, indeed for satire remains. The public cannot understand the doctor's economic dilemma. He is blamed equally for driving last year's car and for sending out last year's bills. The more thoughtful wonder why we allow large commercial concerns (which invest in the medical thought of the day) to dominate our therapeutic habits, or why we sanction with tight lipped candour the vapid propaganda that pours out in increasing floods. Some are troubled by anachronisms in medical books. Still others cannot understand the ridicule and resistance that profoundly original minds have met in advancing the frontiers of medical knowledge. A public that confuses science with the invention of new gadgets cannot be expected to understand these matters and they are easily misled. Someone with a measure of understanding of medical difficulties should explain as well as may be; someone who will not mistake the doctor's firmness for cruelty, his dispassionate concern for coldness, his concise descriptive terms for obscurantism; someone who understands that the doctor must think in terms of pathology while the patient can only comprehend the simple language of symptoms. Organised medicine like any other vested interest will only be benefitted by intelligent criticism. It can only be seriously harmed by flagrant, albeit inadvertent, misrepresentation. If we grant some such premises it may not seem hopeless that before us the bank of cloud must "lay brightly, bearing the shape of battlements".

CLARENCE GORDON CAMPBELL, M.D.

Pictou, N. S.

Correspondence

Antigonish, N. S., December 7, 1937.

The Editor,
The Nova Scotia Medical Bulletin,
Halifax, N. S.

Sir:

Had your editorial on "Fornication and Disease" in the October issue of the BULLETIN, appeared in the "Correspondence" column, the article would have been rated as your individual views, but as an "Editorial", the views expressed, and the matter, are open to the interpretation of being those of the readers of the BULLETIN. Dr. Burris' protest in the November issue, is largely based upon the assumption that the profession accepts your mental and moral philosophy. You ask him "to read your article calmly and then decide whether he is for or against the gonococcus as a participant of the marriage contract. If against, are you willing to jettison ideas that stand in the way of many fruitful and happy marriages?" It needs no argument to show that the profession is in favor of having a medical certificate attached to every marriage license. This, assuredly should be the law. Perhaps, Mr. Editor, it might not be a bad idea, (and it might be of advantage to the BULLETIN) to jettison the pagan "trimmings" which adorn the goods carried in your boat.

In the second paragraph, you say that very little is spent on primary prevention. I do not quite apprehend what you desire to signify by "primary" prevention. Do you mean the segregation of all known cases of syphilis and gonorrhoea? This presupposes a survey of the province and registration of every case. If, after this is done, and every case is detained for supervision, care and treatment till cured or immunity supervenes, there should not be much trouble thereafter, as the source of infection would have been removed. In every case of infectious disease, "*the person infected is the source of infection.*" This is true of typhoid fever, cholera, syphilis, gonorrhoea, etc. In the case of syphilis and gonorrhoea, however, (in nearly every case), infection is primarily by direct contact, whereas in typhoid fever and cholera, infection (in nearly every case), is through some medium,—commonly infected water and infected milk, so preventive measures in the latter differ from the direct contact cases. Segregation, then, with proper medical treatment, in my opinion, is the only radical way,—the only common-sense way,—the only sure way of eradicating those social evils. Of course, all this means money and the question arises whether public opinion is enlightened enough to see that the investment will greatly lessen the cost of upkeep of our insane asylums, our blind asylums, our general hospitals, our welfare societies, etc., and, besides, yield large dividends in countless other ways. In addition, education in the homes, schools and by a series of lectures, should be carried out. I know of no medium comparable to the moving pictures for disseminating knowledge of the dangers and ravishes of these "bad" diseases. The film should be carefully made and an educational text out-lining the law and the penalty for its violation, as well as other relevant matter, might be interspersed at suitable

intervals. Every theatre in the province should be obliged to show this film at regular intervals—say every two or three months.

Now, Sir, permit me to quote a few sentences from your Editorial that seem to be out of touch with Christian teaching and philosophy:

(1) "To speak of a disease as 'bad' and to imply that others are 'good' is just so much nonsense". The Christian belief is that man has free will and that sin is a wilful violation of the law of God. Syphilis and gonorrhoea are dubbed 'bad' when they are contracted by an act of the will and are a wilful violation of the moral law.

(2) "The reproductive act is a fulfilling of the law and is only sin in so far as it collides with our community and social experience of what is wisest and best. What untold harm has resulted from linking the sexual act with the idea of wrong, something to be ashamed of, the immoral." "Sin", according to your teaching, is only "sin" when it violates what is best in our community and social experience,—a man-made criterion, with no thought of "sin" being a wilful violation of the law of God.

(3) "... the genius has yet to be born who can estimate the mass of human misery that has emanated from taking seriously Mother Eve's little affair with the serpent." (Vide Genesis, Chapter 3). Christians believe the Bible to be the inspired word of God.

(4) "That such medieval ideas that disease, storms, earthquakes, etc. are 'punishment for sin', at the hands of an outraged Deity should persist as late as twenty years ago, is interesting as it is regrettable."

Let me ask you, Mr. Editor, what the following few quotations mean (of which there are many), if not that sin is punishable even in this world? Isais, Chap. XXIX-6: "A visitation shall come from the Lord of hosts in thunder, and with earthquake, and with a great noise of whirlwind and tempest, and with the flame of devouring fire." God's heavy judgments upon Jerusalem, for their blind obstinacy. Leviticus, Chap. XXVI—20 and 24: "Your labor shall be spent in vain, the ground shall not bring forth her increase, nor the trees yield their fruit. I will also walk contrary to you, and will strike you seven times for your sins." Lest you object that these are Old Testament quotations, let me quote from a member of our own profession, the physician of Antioch, St. Luke, Chap. XIX—42-44. Here He prophesied the destruction of Jerusalem for rejecting Him,—the greatest of all sin. Sufficient to say the prophecy was fulfilled, September 8, A.D. 70, midst famine, desolation and every imaginable horror attested to by the Jewish historian, Josephus, *The Encyclopaedia Britannica*, et al. In conclusion, let me cite St. Paul in his Epistle to the Collosians, Chap. 11—8: "Beware lest any man impose on you, by philosophy and vain fallacy, according to the traditions of men, according to the rudiments of the world and not according to Christ."

Yours very truly,

J. J. CAMERON.

Medical Advertising

Because Medicine is an Art and not a skilled trade, advertising on the part of its practitioners has been justly condemned through the ages. It is almost impossible to find in this country at any rate an open example of direct advertising by a doctor of his professional attainments unless he is a renegade from the ranks. In his relation to the public, the ethical practition-

er should be reasonably permitted to insert in the public press a simple notice, free from personalities, under the following circumstances:

1. If he is opening an office in a community.
2. If he is moving the site of his office.
3. If he is leaving his practice for a time with a locum tenens.
4. If he is a specialist and devotes a few days each month to supplying the needs of another community.
5. If he has a large scattered practice in a rural district, the insertion of his office hours in a local paper serves as a genuine convenience to the people, but this only if local custom permits it, and no objection to it is made by his confreres.

With an apparent desire for the sensational rampant in the newspaper world at large, the activities of our profession are usually regarded as excellent "copy". These doings are in most instances given to the press by well disposed friends or admirers of the physician, who believe by this means they are doing him a service in getting him the recognition they feel he justly deserves. Such good folk should remember that to the honest doctor the inner consciousness of work well done, to which may be added words of personal gratitude on the part of its recipient, are far greater reward than glaring headlines. For those who follow this ancient Art with a fit appreciation of all it means, adopt its duties and responsibilities as part of their very lives. Its characteristics become part of the personality. Therefore the doctor regards references to his professional accomplishments in the news as he would a reference to his physical attributes. There is a sense of shame felt.

It is with considerable apprehension that your Provincial Medical Board hears reports that here and there this sense of delicacy of feeling appears lost. Now and then oft repeated words of praise appearing in the press, of professional accomplishments, leads to the belief by their very repetition, that such statements are frankly pleasing to their object or he would make some effort at least to control them. It would appear that even the radio has added its note to the hymn of praise. It is time that this tendency was halted before it reaches greater proportions. As a united, ethical medical profession in Nova Scotia, your aid is solicited to stamp it out.

By virtue of extra professional activities many doctors are given publicity in the press. This cannot be avoided. However, it is a well recognized fact that when the physician has other interests than his professional work they tend to rob him of a portion of his practice. Thus it is that few seek honors apart from the realm of medicine until mature years are reached, and the element of competition has been removed. At this period of life then, press notices of outside achievements rather tend to reduce than increase a practice, since they call the attention of the public to his division of interests.

Unfortunately, in separating publicity of the doings of medical men into two groups, the divining rod must be called Pecunia. What does the recipient of these puffs stand to gain financially so far as the practice of medicine is concerned? If he stands to gain in the slightest he should sternly discountenance them and show his sincerity by giving protest in writing to the journal, bespeaking for it no publicity, but forwarding a copy to the Secretary of his medical society as evidence of good faith.

Considered not as a whole, but individually, to whom should go the praise and the glory? Does not the faithful servant plodding his weary way through the monotony and hardship of a country practice, ill paid, and lacking

the amenities of the town or city, deserve it far more than he who sits in comfort and splendor, and gets it? The roaring "yes" coming down through all the centuries is the answer. If praise be given our profession, let it be given collectively rather than individually, lest unwittingly it profit the undeserving at the expense of him who merits it. By precept let us make this attitude known, and by example show our sincerity.

H. L. SCAMMELL.

Halifax, N. S., November 16, 1937.

Dr. H. G. Grant,
Secretary,
Nova Scotia Medical Society,
c/o Dalhousie Public Health Clinic,
Morris Street, Halifax, N. S.

Dear Dr. Grant:

From time to time we have complaints from the Halifax postal authorities, of specimens addressed to our laboratories, received in damaged condition; I am consequently forwarding herewith copy of the postal regulations respecting the transmission of bottles, vials, etc., with the request that you publish said regulations in the next issue of the BULLETIN, for information of all concerned.

Yours very truly,
P. S. CAMPBELL,
Chief Health Officer.

Excerpt From Postal Regulations

"Liquids, oils and fatty substances in order to be accepted for mailing must be put up in accordance for the following regulations. When in glass bottles or vials, such bottles or vials must be strong enough to stand the shock of handling in the mails, and must be enclosed in a wooden, heavy cardboard or papier mache block or tube not less than three-sixteenths of an inch thick in the thinnest part, strong enough to support the weight of mails piled in bags and withstand handling in the mails; and there must be provided between the bottle and the outer case, a cushion of cotton or spongy material sufficient to absorb the liquid, etc., in case the bottle should be broken, the block or tube to be impervious to liquid (including oils) and to be closed by a tightly-fitting screw-lid of wood or metal with a rubber or other pad so adjusted as to make the block or tube watertight and to prevent the leakage of the contents in case of breaking of the glass. When enclosed in a tin cylinder, metal case or tube, such cylinder, case or tube should have a screw-lid with a rubber or cork cushion inside in order to make the same watertight, and should be securely fastened in a wooden or papier mache block (open only at one end) and not less in thickness and strength than above described. Manufacturers or dealers intending to transmit such articles by parcel post or as samples in considerable quantities, should submit a specimen package showing their mode of packing to the post-master at the mailing office, who will see that the conditions of this section are carefully observed.

Powders and all pulverized dry substances may be sent in the manner prescribed for liquids or when enclosed in cases of wood, metal, papier mache or similar material in such a manner as to prevent the escape of the contents.

Specimens of diseased tissues, when carefully enclosed in specially constructed double tin cases, closely packed with absorbent matter, and with closely fitting screw caps, may pass at parcel post rates, addressed to Provincial Boards of Health, and Public Laboratories."

Department of the Public Health

PROVINCE OF NOVA SCOTIA

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

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

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

OFFICERS OF THE PROVINCIAL HEALTH OFFICERS' ASSOCIATION

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DR. C. B. CRUMMEY - - - -	Trenton
DR. B. S. BISHOP - - - -	Kentville

MEDICAL HEALTH OFFICERS FOR CITIES, TOWNS AND COUNTIES

ANNAPOLIS COUNTY

Hall, E. B., Bridgetown.
 Braine, L. B. W., Annapolis Royal.
 Kelley, H. E., Middleton (Mcpy. & 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 (Mcpy).
 MacKinnon, W. F., Antigonish.

COLCHESTER COUNTY

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

CAPE BRETON COUNTY

Densmore, F. T., Dominion.
 Fraser, R. H., New Waterford.
 Martin, H. J., 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 (Mcpy.)
 Gilroy, J. R., Oxford.
 Henderson, C. S., Parrsboro.
 Cochrane, D. M., River Hebert (Joggins).
 Withrow, R. R., Springhill.

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

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	Cholera Nostras	Septic Sore Throat	Tonsillitis	TOTAL
Annapolis.....	2	..	..	..	3	..	..	1	..	..	..	..	5	..	1	..	..	..	12
Antigonish.....	25	..	..	..	..	35	..	..	..	5	..	..	..	..	..	..	..	..	65
Cape Breton....	..	1	..	..	..	..	..	..	27	2	..	..	..	..	27	..	..	..	57
Colchester.....	..	..	1	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	1
Cumberland....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Digby.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Guysboro.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Halifax City..	3	5	..	..	..	2	..	..	7	..	2	..	..	..	..	..	..	..	19
Halifax.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Hants.....	..	..	..	..	..	..	..	..	..	..	..	..	..	2	..	5	..	..	7
Inverness.....	..	..	..	2	..	..	..	..	4	..	..	..	..	..	1	..	..	..	7
Kings.....	10	..	..	4	1	..	..	..	..	6	1	..	1	..	..	..	1	..	24
Lunenburg....	..	..	..	..	..	..	..	..	..	1	..	..	..	..	..	..	..	..	1
Pictou.....	..	..	..	5	..	..	..	1	2	..	1	..	1	..	..	..	..	15	25
Queens.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Richmond.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Shelburne....	5	..	..	..	31	..	..	1	..	..	..	..	1	1	..	..	..	..	39
Victoria.....	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..	..
Yarmouth.....	..	..	..	..	..	..	..	..	..	4	..	..	..	..	..	..	4	..	4
TOTAL.....	45	6	1	11	35	37	..	3	40	18	4	..	8	3	29	5	1	15	261

Positive cases Tbc. reported by D. M. H. O's. 81.

RETURNS VITAL STATISTICS FOR OCTOBER, 1937.

County	Births		Marriages	Deaths		Stillbirths
	M	F		M	F	
Annapolis.....	22	11	13	14	7	0
Antigonish.....	20	7	8	8	14	0
Cape Breton....	111	96	75	39	29	5
Colchester.....	21	15	18	15	16	2
Cumberland....	38	28	39	17	21	5
Digby.....	20	8	18	10	3	1
Guysboro.....	14	12	8	6	7	3
Halifax.....	92	93	103	78	39	6
Hants.....	25	17	26	14	9	0
Inverness.....	16	16	13	19	8	0
Kings.....	44	39	34	13	17	0
Lunenburg....	33	27	27	9	18	0
Pictou.....	30	33	38	16	13	0
Queens.....	16	20	4	7	4	1
Richmond.....	9	6	8	6	4	0
Shelburne....	5	8	15	8	10	0
Victoria.....	1	4	4	3	2	0
Yarmouth.....	25	25	17	19	13	1
	542	465	468	301	234	24

DIGBY COUNTY

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

GUYSBORO COUNTY

Chisholm, A. N., Port Hawkesbury, (M.H.O. for Mulgrave).
 Sodero, T. C. C.; Guysboro (Mcpy).
 Moore, E. F., Canso.
 Monaghan, T. T., Sherbrooke (St. Mary's Mcpy.)

HALIFAX COUNTY

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

HANTS COUNTY

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

INVERNESS COUNTY

Lindsay, R. D., Port Hawkesbury.
 Boudreau, Gabriel, Port Hood, (Mcpy. and Town).
 Proudfoot, J. A., Inverness.

KINGS COUNTY

Bishop, B. S., Kentville.
 Bethune, R. O., Berwick (Mcpy).
 de Witt, C. E. A., Wolfville.
 Cogswell, L. E., Berwick

LUNENBURG COUNTY

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

PICTOU COUNTY

Blackett, A. E., New Glasgow.
 Chisholm, H. D., Springville, (Mcpy.)
 Whitman, H. D., Westville.
 Crumme y, C. B., Trenton.
 Young, M. R., Pictou.
 Benvie, R. M., Stellarton.

QUEENS COUNTY

Ford, T. R., Liverpool (Mcpy).

RICHMOND COUNTY

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

SHELburne COUNTY

Brown, G. W. Clark's Harbour.
 Fuller, L. O., Shelburne, (Town and Mcpy)
 Wilson, A. M., Barrington, (Barrington Mcpy.)
 Lockwood, T. C., Lockeport.
 Churchill, L. P., Shelburne.

VICTORIA COUNTY

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

YARMOUTH COUNTY

Hawkins, Z., South Ohio (Yarmouth Mcpy).
 Morton, L. M., Yarmouth.
 Lebbetter, T. A., Yarmouth (M.H.O. for Wedgeport).
 LeBlanc, J. E., West Pubnico, (Argyle Mcpy).

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

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

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

Report on Tissues sectioned and examined at the Provincial Pathological Laboratory from November 1st, to December 1st, 1937.

During the month, 235 tissues were sectioned and examined, which, with 51 tissues from 9 autopsies, makes a total of 286 tissues.

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OBITUARY

THE BULLETIN regrets to announce the death of Dr. W. J. Kennedy which took place at Musquodoboit Harbour on Tuesday, November 9th. Dr. Kennedy was the son of the late Rev. John and Mary Kennedy of London, Ontario. He was born in 1870 and graduated in medicine from Western University, London, Ontario, in 1897.

First taking up practice at Casselman, Ontario, he remained there for about a year, coming to Nova Scotia thirty-eight years ago on hearing of a vacancy in the profession at Musquodoboit Harbour. Here he remained ever since excepting a short time which he spent in post-graduate work in London, England.

Last December Dr. Kennedy suffered a severe stroke and he had been helpless up to the time of his death. Besides his wife, formerly Miss Jessie Chisholm of Musquodoboit Harbour, he leaves to mourn their loss, three daughters, Miss Irma, R.N., of the staff of the Kentville Sanatorium; Miss Marion, teacher at Musquodoboit Harbour, and Miss Joan at home; also two sons, Stephen with the motor vehicle department, Halifax, and William of the R.C.A.F., Trenton, Ontario.

His funeral was held on Thursday afternoon at two o'clock with Rev. H. S. Graham of the Presbyterian Church officiating assisted by Rev. A. E. Kingsbury of the Anglican Church; Rev. C. Graham of the United Church, and Rev. F. C. Ryott of the Anglican Church, Martin's Point.

Our sympathy is extended to Dr. T. A. Lebbetter of Yarmouth on the death of his mother, Mrs. Michael Lebbetter, which took place at home in North Sydney on Saturday, November 13th. Mrs. Lebbetter was in her seventy-sixth year. Besides Dr. Lebbetter there remain her daughter, Mrs. W. J. McEvoy, New York; Claire and Dr. John Lebbetter of North Sydney.

The death took place in Stewiacke on Saturday, November 13th, of Mrs. Alice A. Dickie, widow of the late Alfred Dickie and mother of Dr. W. R. Dickie of Digby. Mrs. Dickie was in her seventy-eighth year. Surviving her are besides Dr. Dickie are Rufus E. of Stewiacke and Ethel, (Mrs. Roy H. Foss) of Montreal; and four brothers, Arthur and Fred of Canard; Harry of Truro and Frank of Winnipeg.

The death occurred at New Glasgow on December 8th of Mrs. James Roy, aged eighty-six, widow of the late Town Clerk and Stipendiary Magistrate James Roy, and mother of Dr. James J. Roy, of Sydney. She also left to mourn their loss eight daughters.

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Personal Interest Notes

MISS EVELYN BURNS, daughter of Dr. and Mrs. Arthur Burns of Kentville, and now on the staff of the Food Department of John Jay Hall, Columbia University, was married on November 14th in the Central Baptist Church, New York, to Bernis D. Moss, Jr., of that city. Mr. Moss is a graduate and has also taken his M.A. in Industrial Engineering from Columbia, and now holds a responsible position in the Bursar's office of that University. Dr. and Mrs. Burns went to New York to attend their daughter's wedding.

Dr. H. R. Corbett appointed Radiologist to Cape Breton Hospitals.

The appointment of Dr. H. R. Corbett, Kentville, as radiologist to St. Rita's Hospital, Sydney and St. Joseph's Hospital, Glace Bay, by agreement between the two institutions has been announced. Dr. Corbett is at present at the Provincial Sanatorium, Kentville. The appointment was announced after a meeting of the board of St. Rita's Hospital where hope was expressed that other hospital boards would join in employing the radiology service. Until the present, X-ray plates taken at Cape Breton Hospitals have been sent to Halifax to be studied. Such delay will be eliminated after Dr. Corbett's appointment. The service is essential for standardization by the American College of Physicians and Surgeons to which St. Rita's Hospital was admitted about a month ago. Appointment of a radiologist had been advocated since 1930. Last spring the proposal was made at a joint meeting of south Cape Breton hospital boards but the directors were reluctant to act for financial reasons.

Dr. J. P. McGrath of Kentville was elected President of the Kentville Hospital Commission at the last annual meeting.

The wedding took place at St. Thomas Aquinas Glebe at Joggins, Thursday evening, November 25th, at eight o'clock of Marion Margaret, daughter of Mr. and Mrs. Arthur Burke, and Dr. J. Carson Murray, son of Dr. and Mrs. Daniel Murray of Tatamagouche. Following a short motor trip Dr. and Mrs. Murray returned to Springhill where the Doctor is now practising.

Dr. N. H. Gosse of Halifax has returned from a trip to Philadelphia and New York.

Dr. and Mrs. J. B. Reid of Truro have returned from a month's vacation spent in Eastern United States.

Dr. and Mrs. W. A. Hewat of Lunenburg have returned from a two weeks visit to New York.

Dr. A. P. Magonet who formerly practised at Mulgrave has established himself at North Sydney.

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The marriage took place at Yarmouth on October 30th at the home of Dr. and Mrs. Ross Wright of Eileen MacKay, daughter of Town Solicitor R. G. MacKay of New Glasgow to Dr. J. Earle Hiltz, assistant medical superintendent of the Nova Scotia Sanatorium. Following a brief visit with relatives in various parts of the province Dr. and Mrs. Hiltz have taken up residence in Kentville.

We regret to learn that Dr. S. L. Walker, former secretary of our Society, was seized with a stroke while addressing a meeting of the Oddfellows Lodge at Economy on the evening of November 19th. Dr. Walker was taken to the Colchester County Hospital at Truro and we are glad to learn that the latest reports state that his condition is gradually improving.

Dr. and Mrs. A. C. Fales of Middleton have left for a rather extensive holiday planning to be away for six months. The first part of the holiday will be spent in Boston and following that they plan to spend the latter part of the winter at St. Petersburg, Florida.

Maritime Death Rate is Highest in the Dominion

Deaths from Cancer are increased to 105 per 100,000. Canada's 1936 death toll was 106,617, according to preliminary figures published in the annual report of the national health department during November. This represented a ratio of 9.7 per thousand of population. The highest rate was in Prince Edward Island, 11.1 and the lowest in Saskatchewan, 6.7.

The Maritime Provinces throughout showed the highest death rate, with 11.0 for New Brunswick and 10.7 for Nova Scotia. The lowest throughout was the Prairie Provinces, where Alberta's rate was 7.7 and that of Manitoba 8.7. In British Columbia the rate was 9.6. The two central provinces ran fairly parallel, 10.2 in Ontario and 10.3 in Quebec.

The total number of deaths in Canada of children under one year was 14,508, or a rate of 66 per 1,000 live births. This was lower than 1935 when the rate was 71.

Deaths from cancer increased compared with 1935, the rise being from 11,156 to 11,652, or a rate of 105.8 per 100,000 of population against 102.2 for the preceding year.

Tuberculosis accounted for 6,745 deaths, and all forms of pneumonia, 7,226. Fatalities from motor accidents numbered 1,277.

At the Annual Meeting of the Provincial Medical Board held on Friday, November 5th, 1937, at Halifax, the following officers and committees were appointed for the ensuing year:

- | | |
|---|-------------------------------|
| President: Dr. J. G. MacDougall, Halifax. | Legislative Committee. |
| Registrar: Dr. H. L. Scammell, Halifax. | Dr. H. K. MacDonald, Halifax. |
| Executive Committee. | Dr. M. J. Carney, Halifax. |
| Dr. J. J. Cameron, Antigonish. | Dr. M. G. Burris, Dartmouth. |
| Dr. H. K. MacDonald, Halifax. | |
| Dr. M. G. Burris, Dartmouth. | Solicitor. |
| Discipline Committee. | L. A. Lovett, K.C., Halifax. |
| Dr. J. C. Morrison, New Waterford. | |
| Dr. A. B. Campbell, Bear River. | |

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Your Doctor makes a Christmas List

In this season of Christmas lists, it is interesting to consider the list Modern Medical Science could write. It would be a list of achievement . . . a list of hope . . . a list, to many, of revelations. If your doctor, as your own personal representative of Medical Science, were to make such a list, here are some of the things he could offer:

For Babies

Modern Science has made this the safest time in all history for a baby to be born. The modern baby has a better chance than all its predecessors of entering this world sound and healthy—and of surviving that most dangerous period, the perilous first year.

For Children

Today, no child need have diphtheria—and modern laboratories have made available preventive measures against such other "diseases of childhood" as smallpox, scarlet fever, and whooping cough.

For Grown-ups

For the first time in history, men and women face a world that has conquered diabetes and pernicious anemia, and is waging a winning battle against syphilis. Since they were children, great strides have been made in surgery; and notable advances have been made in both diagnosis and treatment.

For the Middle-aged

The so-called "degenerative diseases" have long made middle age a hazardous age, and millions old before their time. With increasing understanding of circulatory disturbances, kidney disorders, and other ailments, Medical Science has prolonged the "prime of life".

For those in fear of Cancer

Through the miracles of modern surgery, X-Ray and radium, many cancers, if discovered in time, can be cured. And with present-day diagnostic methods, more cancers can be discovered early—discovered in the curable stage.

For those with Heart Trouble

Medical Science has made important headway against heart disease in two directions. *First*, in ability to detect it early. *Second*, through more effective means of controlling heart disease so that the patient can lead a pleasant, useful life and frequently enjoy his full span of years.

These are only a few of the important contributions Medical Science has recently made to the good health and long life of our generation. Your doctor will be glad to tell you about them.

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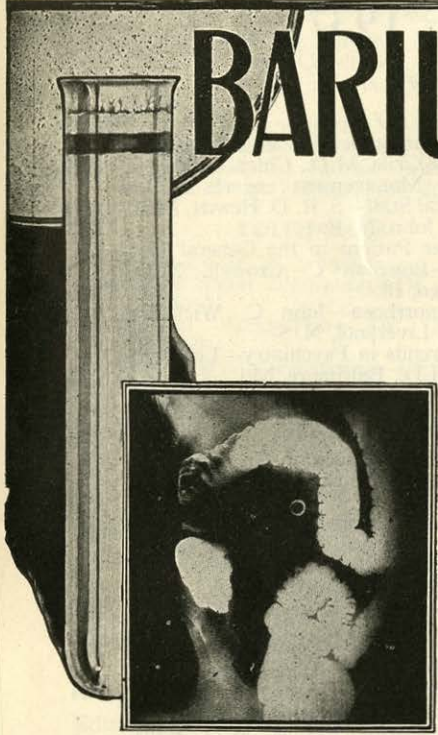
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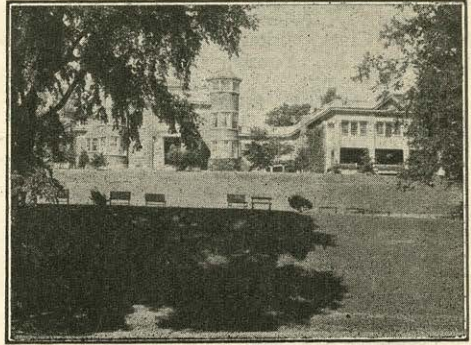


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