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Contents August, 1946

SCIENTIFIC:

The Principles of Military Surgery as Applied to Civilian Practice— J. A. MacFarlane, M.D., Toronto, Ontario - - - - -	245
Here and There—H. W. Schwartz, M.D., Halifax, N. S.- - - - -	251
Transurethral Resection of the Prostate—Clarence L. Gosse, M.D., Halifax, N. S. - - - - -	263
Thyrotoxicosis and Its Treatment with Thiouracil—J. H. Charman, M.D., Halifax, N. S. - - - - -	267

ABSTRACTS FROM CURRENT LITERATURE:

By E. D. Sherman, M.D., Sydney, N. S.

Treatment of Addison's Disease by Implantation Method - - - - -	272
Bone Infections Treated with Penicillin - - - - -	272
Hyperthyroidism and Thiouracil - - - - -	273
Thiouracil in Preoperative Management of Hyperthyroidism - - - - -	273
Periatheritis Nodosa and Hypersensitivity - - - - -	274
Treatment of Sinusitis with Penicillin - - - - -	274
Suppressive Treatment of Malaria in Military Forces - - - - -	275
Early Vitamin Deficiency - - - - -	275
Programme Refresher Course and The Medical Society of Nova Scotia Combined Meeting - - - - -	277

CORRESPONDENCE:

Letter from Department of Veterans Affairs - - - - -	281
Letter from Lt. Colonel E. W. Mingo - - - - -	281
PERSONAL INTEREST NOTES - - - - -	283
OBITUARY - - - - -	285

The Principles of Military Surgery as Applied to Civilian Practice*

J. A. MACFARLANE, M. D., Toronto, Ontario

Ladies and Gentlemen:

I have ventured in this short paper to look backwards on the panorama of war surgery. Throughout the country that is Canada thousands of young doctors are returning to their homes, to their practices, to their internships in hospitals, to a completely new way of life to that which they have known in the war years. It may be that some of them feel that from a professional viewpoint they have gained but little. That is undoubtedly true if one narrows professional gain to the acquiring of skill in newer methods of therapy and considers only those who served in Regimental capacities. However, I am sure that the majority of these men who renounced training and the opportunity for increasing their knowledge of medicine at home would be the first to acknowledge the advantages of war service in broadening their knowledge of the world, the people who live in it, and thereby the wide field of human relations without which no student of medicine, whether in specialist or other practice, may hope to attain complete success.

But to-day our task is to try, if possible, to review from the purely surgical aspect some of those lessons which, if not always originating with war, at least were underlined and clarified in these last few strenuous years.

In the early years there was much discussion in England about the proper treatment of burns. With the Battle of Britain, large numbers of young airmen suffered severely from this sort of trauma. Then with incendiary raids on all the great cities, patients with burns were admitted in increasing numbers to the civilian hospitals. With tank warfare in the desert, burns became an important group of war injuries. It is gratifying to note that through combined efforts of clinicians and research workers in England, Canada, and the United States, the treatment of this condition has been simplified and at the same time the mortality and morbidity greatly decreased. In some 522 burns admitted to Basingstoke, the Canadian centre for treatment, there were only six deaths, and the early restoration to normal function was accelerated by modern methods of treatment.

I think it is now agreed that the best early treatment of burns is the application, after gentle removal of dirt and devitalized skin, of a bland dressing and the fixation of the part with bandages over thick pressure dressings such as cotton waste. The next indication is for the correction of protein and fluid loss, as indicated by Haemaglobin and Haematocrit estimations. Adequate original dressings applied following debridement should not be disturbed for 10-14 days. The administration of sufficient amounts of Sulphonamides or Penicillin is controlled by frequent determinations of the level of the drug in the blood stream. Cases coming to the surgeon with inadequate or delayed primary treatment will need the advantages of saline bath therapy to control sepsis. In all cases the early replacement of skin loss by graft will prevent chronic sepsis, minimize subsequent contracture, and reduce morbidity. Perhaps to achieve the same results which were possible in the Forces, it may well be necessary to reorganize our treatment facilities in larger hospitals. A small burn therapy unit would seem to be a justifiable division of the casualty

* Paper presented at the annual meeting of the Canadian Medical Association, Banff, Alberta, June 12, 1946.

department of every large hospital. Certainly the lessons from war teaching are sufficiently clear if we wish to apply them.

Wounds and Compound Fractures

The whole subject of wound treatment has been closely scrutinized in the past seven years. There has been gradual but logical modification from the established practice during the last war of antiseptics and irrigations to the present day treatment of early and adequate debridement, immobilization and early secondary closure, with the aid of chemotherapy. Trueta, expanding and clarifying the principles of Winnett-Orr taught us the value of early and complete *rest* in wounded limbs. He stressed the importance of radical and early excision of open wounds caused by external violence. Before the advent of chemotherapy he had taught us the value of open wound treatment with infrequent dressings. This in itself was a great step forward. Then, with Penicillin it was possible to cover such wounds at an early date with nature's best dressing—which is skin, and so in the final stages of the war the cardinal principles of wound surgery were these; 1: Early and adequate surgery; 2: Adequate splinting of extremities with the wound packed lightly but widely open; 3: Early chemotherapy, and finally; 4: Closure of the wound at the centre for definitive surgery. These principles are still sound when applied to industrial wounds and compound fractures in civil practice. They may be modified in view of the fact that the transportation problems of military surgery rarely confront us in civilian practice. The patient admitted with a severe injury in civilian life is usually maintained in that centre for his definitive treatment. With the advantages of penicillin therapy immediate closure of many wounds may be undertaken with good hopes of primary union. It is well to remember, however, that even with penicillin at hand, no wound comparable to a war wound can be closed *per primum* unless one is assured that foreign material and devitalized muscle have been removed. Penicillin, whether applied locally or given by the intravenous route, cannot reach the depths of a fragment of muscle that has no blood supply. Otherwise than this modification of primary closure the lessons which we learned about wound treatment in these last six years can be applied directly to practice in civilian life. Early and adequate exploration and debridement, chemotherapy, wise use of the principles of rest—these remain the lines of treatment for severe wounds and compound fractures in civil practice.

The greatly improved results in abdominal wounds do not reflect any profound change in surgical technique but rather the application of fresh knowledge in resuscitation and post-operative treatment. Only in one aspect of abdominal wound treatment was there a definite change in policy. That is in relation to perforations of the colon. It has little direct application to civilian practice, but it is worth noting that the results from exteriorization of colon perforations or the closure of multiple holes with a defunctioning proximal colostomy reduced the mortality by half when compared with the policy of closure in the last war.

In the field of resuscitation and the treatment of shock, great strides were achieved. It was shown conclusively that blood serum and plasma could be used effectively to control shock in the severely injured soldier. The use of dried serum and plasma allows for the storing of this important means of

therapy and its transportation and use in all extremes of climate. The use of the blood bank, employed extensively in the Spanish Civil War, was elaborated and extended by the British Army Blood Transfusion Service, so that by the end of the war there was no area in the world where British or Allied armies fought that whole blood and blood derivatives were not ready to the hand of those who needed them. Likewise, in every hamlet and town in Britain the facilities for prompt treatment of shock were available. Our own research unit made a valuable contribution to the study of the severely wounded soldier, doing much to guide the surgeons and physicians in scientific treatment. A great amount of knowledge and experience has been accumulated as a direct result of war experience that will be applicable to civilian life. One of the immediate results is the movement on the part of the Canadian Red Cross Society to set up blood banks across Canada. It may well be that we shall see the time when blood and blood derivatives will be as readily available in peace time practice throughout Canada as they were in the last few years in the various theatres of war.

The other important factor in improved results, particularly in abdominal wounds, was improvement in post-operative care. Here again the proper balance of protein intake, caloric requirements, and total fluid requirements, gastric suction, careful observation of kidney function—these were all problems which the busy surgeon in the advanced surgical centre kept constantly in mind. We learned early in the war that acute abdominal wounds could not be moved safely for at least ten days after their operation. Consequently, at every advanced surgical centre there was always a group of these seriously injured post-operative cases. That seven out of ten of these desperately injured survived is, I believe, due in no small measure to a standard of post-operative care, which, although carried out amid trying and difficult conditions and tremendous stress of work, was the equal in standard to anything in our large civilian hospitals in Canada. If such a standard was possible in tents in the Liri Valley, in makeshift wards in schools, churches and tents in North West Europe, I am sure that none of these young men will be satisfied with less wherever they may work in Canada. There are, (I am sure) further advances to be made in post-operative therapy. We were, at the end of the war, just beginning to learn the place and importance of maintaining protein metabolism during convalescence. We learned much from our expert on nutrition, Major Bensley, about hospital diets, and perhaps if similar surveys to those made in our military hospitals overseas were carried out on our hospital diets in civilian hospitals we might frequently find instances of protein insufficiency when judged by modern knowledge of protein requirements in convalescence and disease. I think it is reasonable to assume that military medicine has done a great deal to improve standard pre-and post-operative care, and to stimulate further study of nutritional requirements in disease and convalescence.

An important function of an army medical service is to restore men, following disease or injury, as quickly as possible to a condition of health and morale which will allow them to resume their duties as soldiers. Physical medicine to many of us, when joining the forces, meant various mechanical and physical aids employed in massage departments of civilian hospitals. The army organization of large convalescent hospitals and convalescent

depots in their final forms, was to some of us at any rate a revolutionary change in the concept of physical therapy. We learned the value of mass physical exercises for bed patients in general hospitals. We learned that as soon as a patient could be an up-patient, whether with crutches, a walking plaster, or with his body encased in a plaster jacket, he was on the whole better to be transferred to a centre where, with hundreds of others, he could begin active graded remedial exercises. Under properly organized supervision, with the best of food that was available, with organized entertainment, not only did he recover his morale, but his physical disabilities and general physical well-being improved with much more speed than in a general hospital. The stress in all our centres was on guided, graded, active exercise. We had, fortunately, little in the way of physical apparatus. We had bicycles and various modified pieces of gymnasium machinery but only the simplest means of applying heat—electric cradles. Returning to civilian life, one realizes that there is, perhaps, not the urgent need for such an elaborate programme of physical and remedial therapy. It is difficult to reproduce similar programmes in civilian hospitals, but I believe much might be done in the way of routine exercises for ward patients and the incorporation in every large hospital of a gymnasium where up-patients, both from the wards and the out-patient departments, might receive graded group exercises. Such a room should be capable of conversion in the evenings to a general meeting place where moving pictures and other entertainments might be held. There are other applications of the modern principles of physical medicine. Industry in England is very much aware of its value, as evidenced by the schemes in the Austin Motor Works in Birmingham, and the Railway and Coal Miners' convalescent centres in the North. Industry believes it "pays." I am hoping that there are now a sufficient number of young doctors and physiotherapists from the Forces scattered throughout Canada, men and women who have seen modern physical medicine as it was employed during war, that similar methods may gradually be introduced into our practice of medicine and surgery in civil life. It will need patience, it will need modification according to varying conditions and circumstances, but I am satisfied the basic principles were sound.

The treatment and control of disease by chemotherapy has made tremendous advances during the war years. The place of sulphonamides in treatment, the dangers and limitations of these drugs, have been the subjects of much research and study. Penicillin, starting from such humble beginnings in the laboratory of Florey in Oxford in the early years of the war, soon developed into the wonder drug of the century. The war and the organizations incidental to war economy are to a large degree responsible for the rapid evolution of Penicillin manufacture and its purification to the present standards. The indications for its use, the methods of administration and the results of treatment are scarcely subjects for a paper such as this. It is well, however, to remember that a great deal has been achieved in the study of its pharmacology and therapeutic uses, that there are certain organisms which are definitely penicillin resistant, and that it is scarcely intelligent treatment to prescribe penicillin in every case where there are the signs and symptoms of infection, if one does not have some indication of the bacteriology of the infection. Like the Sulpha drugs, it has its limitations. Unlike them, fortunately, it is almost

non toxic, but that is scarcely a reason for indiscriminate and unintelligent use. The medical literature of the experience of war workers is the best standard of present day knowledge of the uses, limitations and dangers of both sulphonamide and penicillin therapy.

Of all the lessons learned in war perhaps the most intangible and yet the most valuable was the importance of co-operative effort. If any degree of success was attained, if new methods were quickly learned, if knowledge was disseminated rapidly, if mortality and morbidity figures were improved, it was seldom due to individual effort. True, Florey, following Fleming's lead, made the first penicillin in his Oxford laboratory, but it required the co-operation of manufacturers and scientists in the United States and Britain, it required the enlistment of the operations branch of the British War Office and the Medical Research Council to arrange for that first epoch-making series of trials of the drug during the Mediterranean campaign before the world could know of this great revolution in the treatment of war wounds.

Plastic surgery and orthopaedic surgery have combined in the elaboration of new methods in the obliteration of bone cavities and the bridging of gaps in long bones. The orthopaedic and prosthetic services have combined to revise our ideas on certain types of amputations and to confirm our confidence in others. The neurosurgeon, the urologist, the physician, the orthopaedic surgeon, and the physiotherapist have combined in their efforts to succor that hitherto helpless group, the war paraplegics. Here is a whole new vista of hopeful endeavour for the forgotten, helpless folk, the victims of civilian and industrial accidents. It is significant that, already having seen what can be done for war paraplegics, the Compensation Board of Ontario is ready and anxious to avail itself of the facilities, the knowledge and experience gained in the paraplegic centre established for veterans of the Forces in that Province. It will require careful thought and tireless effort on the part of clinicians and agencies in many fields, but the principle of developing latent abilities in the seriously disabled rather than assessing their disabilities and leaving them with varying amounts of financial aid, is one which can be extended to a tremendous degree throughout this country.

These are but a few of the highlights of what we may have learned in war. I have not the time to detail the advances and the improved results in brain and spinal cord injuries, to trace the gradual process of assessing the places of surgical therapy in the protruded intervertebral disc. We believe that we are now in a stronger position by reason of war experience to select the favourable case for operation in this controversial group of cases. Certain aspects of chest surgery have of necessity received concentrated study and a more accurate knowledge of the distant effects of retained foreign bodies in the lung will be gained by further projected clinical research.

In our own Canadian Force, whatever measure of success was achieved was due to the willing co-operation of young professional men from all the provinces and towns in Canada—selfless effort in the rounding out of a medical service which had only one object, the best medical and surgical care of the Service personnel. Perhaps on return to civil life, this of all the lessons we learned may be the most difficult to apply. There as yet seems to be lacking in peace, to some degree, the stimulus to work for common ideals as Canadians which was so encouraging a feature of war-time effort. There are many

conflicting loyalties which face the professional man. I feel, however, that great numbers of those who have spent these last years in the Services will agree with me that it is well worth while to work together for the finest and most complete medical services available for twelve millions of Canadians. Personal, community, provincial, and university loyalties will all have their proper place, but they will not forget how simply, and at the same time how fortuitously, provincial and university alignments disappeared during their war-time service.

Here and There

H. W. SCHWARTZ, M. D.

The Editor has asked me to write about a trip my wife and I recently made to the West Coast, including the Victory Meeting of the Canadian Medical Association at Banff. Many of you have made the same journey, so will be excused from reading this article, but if you do, remember that you are now seeing through another pair of eyes, and the impressions left on my central nervous system may be quite different from those left on yours. Accordingly, both may be right, although quite different.

To us, it was a very happy experience, and the pleasure was so interwoven and dependent upon friends, friends of friends and relatives, that to try to tell the story without reference to them makes this undertaking rather difficult.

My wife (you will excuse me for mentioning her) was at the root of the matter. My health must be cared for—besides we should cultivate the art of taking a holiday—it is something that can only be mastered by practice, and the years left us to pursue the matter are becoming fewer and fewer. The depressing prospect of the wheel-chair period was vividly portrayed. Before the nucleus pulposus again got out of place, did not common sense clearly indicate the path to be followed in the uncertain interval? Did not the Medical Society of Nova Scotia appoint me a member of Council, and was I not morally obliged to discharge the duties pertaining to this office? Was not our daughter in Calgary, and did I not wish to see my sister-in-law in Los Angeles? Not only was I almost persuaded, but the feeble spark of interest was finally blown into glowing enthusiasm.

It would probably be sweltering hot in Southern California, and somewhat chilly at Banff, so the question of clothing had to be decided. Should my socks be light-weight, medium or heavy—cotton or wool, in composition and in what proportions? The tails of one's shirts had already been shortened to repair more exposed parts. Shirts had been on order for over a year, and a promise was on file that delivery would be made in August. Something had to be done. Being a mere male, shirts were not only desirable, but essential. My destitute condition was placed before those in control, and they came to the rescue in the nick of time. Many formidable problems of like character had to be settled.

Mr. A. C. MacDonald and Mr. Thompson of the C.P.R. arranged the details that made our plan workable; the guiding principle being that we should do most of our traveling by day.

Never having travelled by air, and not wishing to depart this fleeting life without such an experience, we decided to go from Halifax to Toronto by T.C.A. So on May 6th, off we started. For my part, it was a very pleasant method of travel, but my wife is of the opinion that practice may make perfect, and is willing to try again.

A couple of days were spent in Toronto, during which a number of social and semi-professional matters were given attention. There are probably Torontonians just as there are Haligonians, who "never would be missed" but as for me and my house, we always have been treated courteously and generously.

We arrived in Chicago, that city of dirt, early in the morning of May 9th, at one station, and were transported through miles of unexcelled delapidation to another station, where we went aboard the C. and N. W. train bound for Omaha, Nebraska. This part of the journey crossed the states of Illinois and Iowa. As seen from the train, the country appeared to be flat to gently undulating extending to the horizon and without a stone in sight. The leaves were just opening. Seeding, by the aid of tractors and horses, was going on all over this green and pleasant land. The cattle seemed to be of the contented variety, and the pigs happy,—as well they might be, roaming the pasture like any other self-respecting animal. "Dirty as a pig," is a reflection on its owner. The general impression from the car window was one of richness, well-kept properties, beautiful homes and great barns—doubtless a picture similar to that enjoyed by the rich young ruler. We missed the cone-bearing trees.

Accustomed to the dignified, first, second and last calls to dinner of the Canadian National and Canadian Pacific Railways, the announcement with the dire alternative, made in a loud voice from the end of the car, "if any of you people want anything to eat you had better come and get it, or do without," evoked astonishment, which quickly merged into amusement.

Omaha is a great railway centre, and its stockyards, we were told, rival those of Chicago. The city would appear to be well cared for, clean and tidy. Under the guidance of one of the Professors, whose guests we were for a few hours, and whose son was a former medical officer in the Royal Canadian Navy, I had an opportunity to visit the Medical Department of the University of Nebraska. One of the most beautiful buildings in this city is the Union Pacific Station. The dining facilities are so excellent, the service so satisfactory, that parties and organizations go there to dine on special occasions. This must be unique among railway station dining rooms.

We were assured that the climate was the worst in the world, intensely cold in winter and extremely hot in summer.

We left on the night train for Denver, and during the darkness, the train had gradually climbed to an elevation of one mile. There was a slight skiff of snow on the ground when we first peeped out in the early morning. Generally speaking the railroad is the back door approach to a city, and as a rule cannot be described as attractive. The impression one gets as the train pulls into Denver is one of orderliness. After several days of more intimate acquaintance, we could say that cleanliness was one of its characteristics. As we emerged from the Depot, we heard on the public address system—"calling Dr. R. P. Smith, calling Dr. R. P. Smith," and we felt at home immediately. This feeling was enhanced, when in the dining-room at the hotel (Cosmopolitan) a few minutes later, a cry went up that "Mr. MacDonald was wanted at the telephone," (probably to be informed that another MacDonald had arrived in this world).

This is a city of wide streets, beautiful trees, and fine buildings, both public and private, with the snow-capped mountains glistening in the distance. The Capitol is situated on a gentle elevation, and separated from the Civic Centre and Public Library by a spacious layout of lawns and drives. We visited the children's section of the Library, and under glass was a copy of a letter and the answers received from a number of people, to the request for a list of books "too good to be missed." Of course the lists were not identical, but it was interesting to note the frequency with which the following were men-

Report of the Pharmaceutical Committee

The President and Members of the Nova Scotia Medical Society:
Gentlemen:

I hereby submit the Annual Report of the Pharmaceutical Committee.

During the year we had referred to us by Dr. H. G. Grant a letter which originated from the Shute Foundation. This letter advocated some control over the dispensing of Vitamin E. We felt some control over Vitamin E in this respect would be of benefit in as much as it is being prescribed by some patients for other patients. However this is true of other drugs and control measures would be difficult to enforce. We did not take any action.

Dr. J. K. W. Ferguson, chairman of the Committee on Pharmacy, Canadian Medical Association, sent us the following letter from Dr. A. D. Kelly, Assistant Secretary of the Canadian Medical Association, for our opinion:

Dear Doctor Ferguson:

The World Medical Association has been requested by the World Health Organization to collaborate on the investigation of habit forming drugs. In order to do so, the World Medical Association would like to receive from each member national medical association:

- (a) Information on the use or dispensability of diacetyl-morphine and an estimate of the amount used in each country.
- (b) An expression of opinion on the proposal that there be established a mechanism for giving a single name to every habit-forming drug subject to international control.

I am directed to refer these matters to the Committee on Pharmacy, and I shall be obliged if you will give consideration to them and let me have your considered opinion at your convenience.

Yours faithfully

(Sgd.) A. D. Kelly

Assistant Secretary

Dr. Ferguson commented in part: "It seems to me that if there is a wide spread conviction among competent physicians in Canada that heroin has certain advantages over morphine in certain uses, we should not agree to have our patients deprived of these advantages for the sake of making it a little easier to secure convictions in cases of breach of the narcotic laws."

We agreed that we should retain the use of heroin, and we also agreed with the idea of giving a single name to every habit forming drug subject to international control. Dr. Ferguson was informed of our opinion.

Respectfully submitted.

(Sgd.) R. A. Moreash

Chairman

Doctor R. A. Moreash moved the adoption of this report which was seconded by Doctor J. P. McGrath and carried.

Doctor H. A. Fraser named the committee to choose the House of Delegates—Doctors R. O. Jones, J. J. Carroll and W. A. Hewat.

Report of the Committee on Industrial Medicine

Dear Dr. Grant:

Shortly after I received your reminder that the report from the Committee on Industrial Medicine was due for the executive meeting at White

than meets the eye from the railroad carriage, as one of these towns was the centre of an amazing livestock industry handling ten million dollars worth of sheep last year.

The crying need of both New Mexico and Arizona is water. The plateau which covers so large a part can never be anything but a grazing land, as it is itself higher than any source of water. The melting snows of winter are impounded in natural depressions and serve for April, May and June. Then comes their so-called rainy season consisting of heavy downpours for short periods daily. Recent years have been unusually dry and last year water had to be imported for the cattle, which was an expensive undertaking and left little profit for the rancher. Ordinarily speaking, a rancher when purchasing a property, figures on the basis of at least forty acres per animal—a statement that was easily believed. At one place there was what appeared to be a factory of sorts, and the surroundings were even more forbidding, consisting of black rocks. These were outcroppings of lava and pumice was being manufactured.

The Grand Canyon was reached by bus on the morning of May 15th. One often hears so much about a scene that the actual seeing is disappointing. Niagara did not impress me as it probably would have, had not honeymoon couples described what they had seen when in a state of exaltation, exhilaration, and optimism. The Grand Canyon was more than it had been represented, it was indeed awe inspiring. The Empire State Building would be an insignificant pinnacle amidst such surroundings and would have to be searched for diligently. The Colorado River, one of the great rivers that is not navigable and consequently plays no part in world commerce, drops at the rate of twelve feet per mile and carries a daily burden of a million tons of erosion. A daily estimate is made and on one noteworthy occasion, no less than twenty-seven million tons was recorded. The rapid flow, with its gritty burden, has in a sand-paper-like fashion worn the inner gorge of metamorphic rock to a depth of fifteen hundred feet. This mighty stream, three hundred feet wide and thirty feet deep, can be seen from the rim of the Canyon, and appears as a narrow brown ribbon. Although three and one-half miles distant, it can be heard as it roars over one of its three hundred and sixty odd rapids.

The vast chasm, the Grand Canyon proper, varies from eight to twenty miles in width and is two hundred and seventeen in length. It is surely the geologists' paradise. The structure of the mountains so revealed shows that they were seven times beneath water, not as the result of violence, but of gradual rising to great heights, only to subside again. What are to most of us "the everlasting hills" are to the geologist a kind of undulating semi-solid!

I was under the impression that Boulder Dam was a great electrical development, which of course it is, but its primary purpose is flood control. As far as one could gather, the energy which will be developed during the next sixty years will pay for its construction by which time the deposit of sediment will have filled up the dam. The lecturer made the statement that the Imperial Valley was composed of soil from Wyoming, Arizona, Nevada, etcetera, carried by the Colorado River and the comment overhead from the seat behind us, was that "they would steal anything in California." Although the average snowfall on the northern rim is two hundred and ten inches and ninety-six inches on the southern, snow never falls in the depths of this mile deep gash

in the face of the earth, where the temperature and both animal and vegetable life are those of dry, hot, arid regions.

As the chance of tumbling in seemed less likely at two thousand feet than at twenty feet and less from the unguarded rim we returned from the lecture by the highway rather than by the walk by which we had come. We were overtaken by the lecturer. In answer to his enquiry, we told him we were from Nova Scotia—thinking that he would say politely “O yes”—meaning merely that he had not the faintest idea where Nova Scotia was. To our surprise he was quite familiar with the western part of the Province—the “land of Evangeline”, as he called it, and said his sister was married to a native of Hantsport. Hearing that the local doctor’s name was MacDonald, I called and found him to be a graduate of McGill, where he and his brother had been class mates of our Doctor Victor O. Mader, and that their parents had gone from Prince Edward Island to British Columbia, where they had been born.

The next objective was Los Angeles, and Sunny California. The conductor on punching our tickets saw the place of origin and told us he was in Halifax on December 6, 1917, the day of the Imo-Mt. Blanc explosion. On our arrival at Union Station, Los Angeles, we made an enquiry from “Information” and the official who answered us said he had relatives in Halifax and that his uncle was or had been the Roman Catholic Bishop of Prince Edward Island, and that it was his intention on retirement to live in Halifax. The pace in California was too feverish, and the principle of the devil take the hindmost, in a wild scramble for money, was getting on his nerves. I only hope the far away pastures will prove as green and refreshing to his weary soul as he anticipates. So with a “God bless you both” he sped us on our way.

In Denver, liquor is sold at the drug stores, not an unreasonable association; so on an awning the items would appear like this: Candy—Liquor—Prescriptions—Cosmetics—Wines—Sandwiches—Tobacco, but in the station at Los Angeles it is sold, by the bottle, at the news stand, along with magazines, stamps and souvenirs. What a town! To describe this great city in a paragraph is quite an undertaking. Like most great cities there are cities within the city, but this amazing place has mountains, ranches, dairy farms, orange, lemon, olive and walnut groves, all within its four hundred and fifty square miles. Anything grows, although apples and pears have a tendency to woodiness. Anything goes as testified by the one and only show attended, where the lights were blacked out to give people a chance to recover from their blushes. It was indeed a refined and delicate touch.

We were thirty miles from the railway station but still in the city. One-storey buildings seem to predominate and architecture in general has a Spanish motif, or so it seemed, whether it is a bungalow or a department store. As you would expect, flowers grow in profusion, but the great variety of geraniums interested me, and our old-fashioned type grows to the size of a shrub and is used for hedges.

We travelled about ten hours a day for eight days, and covered a lot of ground, but can only mention, not describe, the Hazelhurst Foundation for the Blind, where dogs are trained to lead the blind; San Pedro, the port of Los Angeles and where we saw literally thousands of oil wells, a veritable forest of derricks, with their pumps pegging away day and night; the fine layout of the University of Southern California; I bought Nova Scotia (Locke-

port) finnan-haddie on a fish pier at Long Beach and saw great river beds, which, we were assured, were filled with torrential floods at the proper season.

We visited Forest Lawn Memorial Park. I only wish I could adequately describe this truly remarkable place to you. This last resting place occupies three hundred acres of mountain, all to itself. Tombstones were not permitted, only metal plates of uniform size, placed flush with the earth record the name, etcetera. All that the passing visitor actually sees are the extensive ever-green, well cared for lawns, the freshness of which is assured by an underground network water supply.

The entrance to the mausoleum is like that of a great stone church, finished inside in marble. At the far end of the auditorium is the greatest of their art treasures, Leonardo de Vinci's "The Last Supper" re-created in stained glass. Unlike the original it will never deteriorate with the passage of time. The walls of the labyrinth of vaulted marble corridors consist of tier upon tier of crypts into which the caskets are placed with their embalmed contents, or ashes. You would hardly expect to find an art gallery as part of this fying system of the dead, but at the head of a great staircase, that is exactly what is to be found.

There are three churches, all replicas of three found in Britain. One of these represents the church at Stoke Poges, in the churchyard of which Thomas Grey wrote his *Elegy*. Another the *Church Among the Heather* in which Annie Laurie is reputed to have worshipped. Nearer the summit of the mountain is the Church of the Reccessional. Whatever kind of a place could that be? Well, it is a reproduction of the church attended by Rudyard Kipling, and built long before the Norman Conquest in 1066. The day was far spent and we were too late to enter. On the high walls, which go to form, as it were, the courtyard, were two of the most famous of Kipling's poems. The one after which the church is named and *If*. Throughout this "Memorial Park" are reproductions in marble and bronze of the world's most renowned works of art. All in all this remarkable place is as lovely as it is amazing, and one is almost tempted to add, inviting.

We hastened to the top of the mountain to enjoy the view from the look off, but the twilight is so short in this southern land that in the words of Lysander—

"And, ere a man hath power to say, Behold!

The jaws of darkness do devour it up."

Our stay in Los Angeles was made much more agreeable by a light overcoat and the dull days were much to be preferred to bright sunlight. It is not our intention to be so unkind as to follow the example of the mayor of an eastern city who after being the guest of the mayor of Los Angeles for some time on his return home sent a sun lamp as a gift to his former host.

Owing to the railroad strike, we had to travel by car from Los Angeles to Portland in Oregon, a distance of over nine hundred miles, in order to keep our reservations on train and boat. Much to our regret, San Francisco had to be by-passed, and the journey made through the San Joaquin and Sacramento Valleys. These are perfectly level plains that extend for six hundred miles south to north. In the far distance, on either hand, the mountains could be seen. Vineyards, olive, walnut and peach groves were wherever you looked, and far as the eye could see. As the result of irrigation what was formerly a desert now blossoms in greatest profusion. Surely the words of the Psalmist are ever on the lips of those who cultivate these fertile lands—"I will lift up

mine eyes unto the hills, from whence cometh my help. My help cometh from the Lord which made heaven and earth."

As we entered Oregon, we ascended to over five thousand feet while we crossed the mountain range before descending into the valley of the Willamette River. There was still snow on the sides of the road, and as we came down into the valley we first saw a Douglas fir. What a tree! I got out of the car and with mouth agape, stared at this magnificent thing, towering to a height that made me dizzy. (On looking the matter up, it appears that this tree averages one hundred and eighty feet in height, but sometimes reaches three hundred and fifty feet, and the trunk is straight and free of limbs for seventy feet and more.) We again left the car to view the Salt Creek Falls (286 ft.) and subsequently followed the clear waters of this ever-increasing and turbulent river all the way to Eugene, the capital of the state. We asked our driver why he had left the lush fertile irrigated plains of California to make his home in this more mountainous region. The answer came promptly, "the people are less artificial, closer to Nature in the atmosphere of lake, stream and forest and consequently it is a better place to rear a family."

When we arrived in Portland, we had to wait a couple of hours before our train left for Seattle, so we went out on the great bridge that spans the Willamette River at this point, and witnessed the raising of the central section of the drawbridge as an ocean going vessel passed through. We got in conversation with the old man in charge, and he told us that in his earlier days ships he had sailed in came to the port of Halifax. From the height of this great bridge, one of several that cross the river at this city, is gained a view of this large inland port, a hundred miles from sea, situated on a tributary of the Columbia River.

The train was late in arriving at Seattle, but during the few hours we had between arrival and departure by boat for Victoria we had an opportunity to see some of the city in company with a young medical friend formerly of the R.C.N.

Canada

On May 30th, we arrived back in Canada at the miniature port of Victoria on the Island of Vancouver. All have heard about "this capital city of our most western province." The reason for the seat of Government being placed so far from the mainland and centre of population is not obvious. Perhaps it was believed that the peaceful and charming surroundings would be conducive to well considered legislation, and distance would discourage petitioners of one kind or another.

The Parliament Building is massive, well balanced although inclined to be ornate, surrounded by spacious lawns and presents rather an impressive picture. One of the two semi-detached blocks at either end of the main building is occupied by the Provincial Museum. This well arranged collection presents in a fascinating way, everything that bears upon the Province of British Columbia. No one can enter this building without witnessing one of the most incongruous of sights. Amidst all this attractiveness one building, which I presume contains a canteen for the refreshment of the public servants, is covered with the gaudy signs indulged in by cigarette and soft drink manufacturers. What an outrageous spectacle to present to the tourist, who represent ninety per cent of this town's business! If these manufacturers would

only turn their efforts to beautifying rather than defacing our towns and cities, what a pleasing prospect it would be.

The Canadian Pacific Railway "Empress Hotel" is a real showplace, but in spite of its grandeur, is as restful and homey as one's own fireside, their architects and decorators have the knack of so designing and combining. The grounds with their beautiful trees, lovely gardens and well kept lawns, are a sight in themselves.

Like most coastal cities, Victoria is built on a firm foundation, the rock being often in evidence. It is a residential city and here you may see many homes that are ordinary but no slums. Here are a great many homes and gardens particularly in the Uplands district that are unusually beautiful. Others near the water are quite picturesque as they cling to the cliffs like those of a fishing village. The climate is usually stressed as a feature to be considered by those contemplating retirement. Flowers bloom early and late, the grass is always green, golf can be played the year round. The furnace fires are on from the first of October to the last of April. There is seldom frost or a snow flurry, but even in summer, a cold wind drives the inhabitants out of their gardens at mid-afternoon. Sea bathing can only be indulged in by the hardy, and by them it is of only momentary duration, but the tremendous heated pool provided by the Canadian Pacific Railway at very reasonable rates offsets this drawback. As far as I could gather, the climate can be compared to that of England, which shares delightful summers with the rest of the temperate zone, but anyone who has spent a winter there will understand that while he never actually freezes, he is in a chronic state of chill and benumbment.

I met an Englishman who years ago had been sent to Halifax by his company, and lived here for some years. He was then transferred to Victoria, and although this was over thirty years ago, he still refers to Halifax as "home." "Things in Nova Scotia tasted better, the strawberries here are larger, but are tasteless, the apples are equally beautiful, but lack flavour" and down the list he went until he arrived at—"The fish off Nova Scotia coast are different too." The difference was all in favour of the Atlantic varieties. He was of the opinion that there was some favourable relationship between earth and frost; fruit and flavour.

During our stay here, we enjoyed the Malahat drive and had the opportunity of seeing the great drydock at Esquimalt, which was able to care for the Queen Mary. This Naval Base is continuous with Victoria, though a distinct municipality.

Our next move was to cross the Gulf of Georgia to the mainland, a trip of about six hours by one of the Canadian Pacific Railway "Princess" boats. This great city of Vancouver, celebrating only its "Diamond Jubilee" this July, 1946, shelters approximately one-half the population of British Columbia. It is Canada's third city and one of the most beautifully situated cities in the world. Here, man has had sense enough to take advantage of the Creator's work and has planned accordingly. The results are a credit to both God and man. The first impression, and I may say a lasting one, was of its cleanliness, on the one hand, and its noisy street cars on the other. It is odd the things you first notice. In all probability the street cars are not a bit noisier than elsewhere.

Everything is on a grand scale. Stanley Park is all that is claimed for

it as a recreation area. The trees are twice as tall as in the east and all try to rival the Douglas fir in height, if not in girth. Even the maple, a tree in which all Canadians have a peculiar interest, appears in glorified form and is referred to technically as the acer-macrophyllum, accent on the macro.

The University site comprises in all an area of five hundred and forty-eight acres. One-half constitutes the campus proper, the remainder being divided into gardens and farmlands for the Faculty of Agriculture, and a forest reserve, the latter to serve as an outdoor laboratory for students of forestry. Only a comparatively few permanent buildings have been erected, such include the library and that for applied science. The physics building is now under construction. During this last session of the legislature the Government made a grant of five million dollars to the University for its development. One of the crying needs, is for a Medical School, and plans are far advanced to this end. The vitality evident in this youngest of Canadian Universities, whose doors were first opened in 1915, is an inspiration and augurs well for the life of British Columbia and Canada as a whole. Its President, Norman MacKenzie, is from Dalhousie University, and the Dean of its Law School, now being organized, was a former Dalhousie professor.

Both the Park and the University grounds occupy the tips of great fingers of land; these jut out into the Gulf and are so surrounded by water on three sides that they can never be encroached upon by the city, regardless of the size it may become.

Few communities have such an assortment of scenic drives, combining sea, mountain and stream, and in addition those of the city itself, with its unexcelled residential section of O'Shaughnessey Heights, with its curving driveways, and gorgeous gardens and homes of varied but harmonious architecture. We were told that there are nine eighteen-hole golf courses within the city limits, and it has been referred to as "The City of Parks and Golf Courses."

Does perfection reign uninterruptedly in this delightful place? Yes, except from the last of October to the first of March when rain and fog take over. Ice is seldom seen in the winter, neither is the sun and this latter is of pathological significance. Some people become so depressed that their health is impaired. A business man of my acquaintance had to be sent to the prairie by his doctor in order that he might be reassured that the sun still shone. Fortunately, he has become acclimatized and verifies the prediction made in the popular song of the Navy Show *You'll Get Used to It*.

The time came to leave Vancouver and cross the Canadian Rockies for Banff, our real destination. We broke our journey at Sicamous, which is midway, in order to travel by day. The Fraser River was in spate, which was a sight worth seeing. We followed along this mighty stream, its aggravated fury hemmed in by the Canyon showed, in every drop, resentment for such restraint upon its lawless will; it was indeed a thrilling spectacle.

How can I describe these mountains! The majesty and grandeur of it all fills one with awe. What evokes equal wonder, is the imagination, daring, faith and tenacity, the consummate engineering skill that tunnelled the mountains (doing an actual spiral within one of them), made safe shelves along the edges of mighty chasms, constructed bridges in unbelievable places, in order that a railroad might be laid to unite the people and further the commerce of this Canada of ours.

In order to see as much as possible, our neighbour occupying the seat

across the aisle, and ourselves would all go first to this window, then to that, and as a result of this exchange of scenery, carried the matter so far as to speak; not all at once, you understand, but gradually, with decency and order. She proved, during our eventual conversation, to be a doctor's wife, which helped matters along, and she asked, "what is the name of that famous school in the East, that turns out so many outstanding men?" So, quite modestly?—overlooking everything between Manitoba and Nova Scotia, I answered "Dalhousie," and she promptly answered, "Yes, that's the name."

Banff—what an amazing place it is. Nature has outdone herself. It is almost too perfect, if such does not sound like nonsense. The Banff Springs Hotel takes full advantage of the perfect arrangement of the surrounding mountains. It overlooks the meeting place of the Bow River, as it rushes in tumultuous impetuosity, all in foam and fervour, to join the Spray, which meets its mate without a ripple to evince its deep emotion. Quite properly the united life continues as the Bow. The valley down which they flow is now the famous golf links. At the far end a snowcapped barrier rises, as if to cut off the runaway lovers but, as is well recognized, love finds a way—and off they suddenly turn to the East, and we subsequently follow this river to Calgary.

We went to see Lake Louise—like an emerald jewel in a rugged setting. It is a small lake, of a gentle greenish hue, having probably less than a couple of miles of shore line. In fact, many of the streams in this region give this colour effect, if viewed through sufficient depth. There seemed to be a stillness, broken only by the trickle of water on its way to the Lake, and once by what we thought was thunder, but which we later learned was the far away roar of an avalanche. These rugged mountains are awesome, indifferent, intolerant, heartless, in their dismal magnificence, and evoke only wonder and cold respect.

Sometimes we are apt to think our American cousins are a bit weak on geography, as one person I met who didn't know where a certain province was, although it bounded her own state on the north. When in Banff, I was in conversation with an employee of the greatest transportation system in the world, who asked me where I was from, and I said "from the East." "Oh," she said, "from Winnipeg." "No, farther away than that." "Then you are from Toronto." "No, farther than that." So, after a long, long interval of cogitation, she finally said "Montreal." I feel quite sure, had I suggested Montreal was in Tanganyika, it would have required little persuasion to have her accept that as the truth. So I asked her, had she ever heard of Quebec—her face was a blank. Then when I said Halifax—the name was as meaningless as one of some remote corner of central Asia. This young woman, well into her twenties, went to school in a city of one of the Prairie Provinces. An American knows his own country. When all is said and done, just how much do you know about Idaho, Wyoming or Tennessee or the whereabouts of Albuquerque, Eugene or Walla Walla? For a Canadian not to know the Provinces of Canada and their respective capitals is nothing short of disgraceful. It reminds one of the radio programme, in which a young woman wearing the King's uniform, when asked a question in Canadian history, the answer to which was Wolfe or Montcalm, answered Abraham Lincoln.

So, on June 16th we left Banff and followed the Bow River as it flowed between the persistent mountains, which threatened never to let us escape,

until all of a sudden we emerged from the pass and were in the foothills. What a relief! The foothills, a great, green undulating plain, with flocks and herds.

Calgary is quite a city, young and sprightly, with lots of "go." It has more trees than I expected, and the rolling nature of its site certainly adds much to its possibilities, some of which have already been exploited by the town planners. "Drinks," short, snappy and economical, is the Albertan for Beer and Wine.

On to Winnipeg, which is no longer youthful, but bordering on middle age. This great city, the gateway to the real West, is built on a plain which is as flat as a table. Through it runs the muddy Red River. It is a city of wide streets, many fine buildings and possesses an exceptionally large and beautiful park, with a splendid zoo, and judging from the surroundings, occupies an area which was originally treeless. One must break the rule and mention an individual, Doctor "Tommy" Lebetter, not only because of his kindness to me personally, but to convey his warmest greetings to all his friends at home—and that really means practically the whole membership of The Medical Society of Nova Scotia. He and his family are going to spend their summer holiday at Kenora, on the Lake of the Woods, because "it reminds me of Nova Scotia," he said.

A side trip to Minnesota, the State of Ten Thousand Lakes, was made by bus to visit relatives. On our way back I occupied a seat with a widely travelled school teacher, who entertained me with her experiences. My wife shared the seat with a school boy of ten, who opened up the conversation and connected up Nova Scotia with Longfellow's *Evangeline*, which had been used in class. After looking her over carefully, he solemnly declared "you look just like we do." He probably expected her to be in "a Norman cap and a kirtle of homespun."

We came down the Great Lakes on the Canadian Pacific Steamship *Assinaboia*, a ship of nearly four thousand tons. This was a very pleasant experience, particularly in a ship free from "ship odour" and with noiseless and throbless engines.

On our way from Toronto to Ottawa, we had our seats in the Buffet Dining Car. It so happened that those in our immediate vicinity were served first and had finished their meal when our turn came. A woman in front lighted a cigarette, the man behind a neglected pipe, the kind that makes itself known before it is even seen, and the person across the aisle puffed a cigar "the most offensive form in which tobacco can be smoked." Our food was thoroughly saturated in second-hand tobacco smoke. As I have always considered myself more or less of a crank and full of prejudice, being only an ultratempere smoker, I was astonished at the violent language—such words! used by one of our life-long tobacco smoking colleagues, who had been exposed to something similar. He said he had been irritated throughout his continent-wide trip by the cigar-smoker, who didn't realize that a cigar was an outdoor smoke. We agreed that the top of the Citadel with a stiff breeze blowing out to sea, fulfilled the ideal requirements.

Ottawa, one of the most beautifully situated capitals with its miles of charming driveways along the great Ottawa river and the lawn-bordered Rideau Canal, is even now something of which any Canadian has reason to be proud: so long as he does not see Bank Street. This street is literally

plastered with an assortment of abominable signs, mostly red and yellow. The whole is a discreditable sight. It is to be hoped that the Federal Commission, appointed to preside over this and the surrounding area, will remedy such eyesores.

The best and most attractive parts of cities are seldom seen from the train, and all travellers understand this. Nevertheless, the backyard may suggest the condition of the interior of any house. With the knowledge that the train was composed of passengers from all over Canada going to a Convention in Digby, I was humiliated on entering Saint John. As a Maritimer, I blushed. Such a scene of dilapidation and neglect along its waterfront seldom greets the human eye in a non wartorn community. Even the Canadian Pacific Railway shed and wharf is drab and down at the heel.

We embarked on the *Princess Helene*, and after some hours in the Bay of Fundy fog, entered the narrow Digby Gut, to suddenly emerge and be greeted by sunshine and that wonderful picture of Annapolis Basin, a scene that captivated Champlain and DeMonts in 1604. To love Canada is like loving mankind. The emotion must find expression in a more restricted field. You will recall the story of the three Cape Breton soldiers who were disembarked at Halifax, only to learn that the train would not leave for an hour and that the bus had just left. In desperation they chipped together and hired a taxi for the one hundred and seventy-nine mile drive. Finally they reached the Strait of Canso, and looking across at the hills of Cape Breton, shouted in chorus, "Boys, there's Canada!"

This Nova Scotia cradled in the sea, this land of gentle beauty and infinite variety, undisturbed by Nature's fits of violence, the temperate zone at its balanced best, where extremes of heat or cold, height or depth are unknown, and twilight lingers over hill and dale and soothes the waters of three thousand lakes, with over forty times one hundred miles of coast line so varied as to appeal to every taste, embellished with innumerable islands, beaches, coves and bays with or without fog, and tides of every known degree, surely this land is one of the Creator's most artistic efforts.

Transurethral Resection of The Prostate

Indications and contraindications

CLARENCE L. GOSSE, M. D., F.A.C.S

PROSTATISM was first recognized as a clinical entity in the early 19th century. Since then many approaches have been made towards its alleviation and practically all methods still have followers today.

Transurethral surgery, although considered by many to be a new advance, antedates all other prostatic surgery, for until suprapubic prostatectomy was developed in the Listerian era, all operations for relief of urinary obstruction were via the urethral route.

Ancient hieroglyphics indicate that urethral catheterization to relieve retention was practiced before medical history was recorded. In 1575 Ambroise Paré of France, designed a two-piece instrument for cutting urethral strictures. In 1806 Sir William Blizard of England, using Paré's principle attacked the prostate transurethrally through a perineal urethrotomy. In 1831 Stafford of England, using the principle designed for cutting strictures, reported cases of transurethral surgery on the prostate by means of a "lanced stilette," and in 1834 Guthrie first described the "median bar" and the successful treatment of same by a similar instrument to Stafford's. In 1877 Bottini first used Galvanic current to "incise" the bladder neck without vision. In 1900 Frendenberg attempted to attach a lens system to Bottini's instrument and thus was born the crude forerunner of the modern resectoscope.

Because of poor mechanics in that era, none of these instruments was satisfactory. They did not excise the tissue, there was no way to effect hemostasis and relief was at best of a temporary nature. It is little wonder therefore, that with the advent of antiseptic surgery, suprapubic enucleation of the prostate, by giving such better results than had heretofore been known, quickly became the operation of choice. Not even the perineal operation, popularized by the writings and teachings of Hugh Hampton Young and used almost routinely in several institutions in America today, has been so universally acclaimed as the suprapubic method or its modifications.

However, as widely accepted as the suprapubic operation became, it did not adequately fulfill surgical wishes, particularly with respect to mortality, morbidity and duration of incapacity.

After the century had well turned and the mechanical era well developed, urology began to make itself felt as a specialty. In an effort to find a way to attack the prostate and yet keep the mortality rate low, methods for approaching it through the transurethral route were revived. The development of the high perfection in today's transurethral resectoscope is as romantic as it is sound, and with it are linked such names as Wappler, Brown, Buerger, Young, Bovie, Braasch, McCarthy and others.

However even with such minds as these plus American mechanical genius, it was not until 1931 that a really satisfactorily workable resectoscope was brought into being. This resectoscope was a good one, and the fact that we use essentially the same instrument today is substantiating evidence of its effectiveness.

Now what can this resectoscope do?—To what extent can bladder neck obstruction be relieved by transurethral resection?—Questions similar to

these are constantly being asked. Even lay people who in keeping with the modern trend of gaining medical knowledge from all kinds of sources, have heard of the operation and in many cases, believe it to be an easy way out of their affliction.

Answers are difficult to give because of the large variety of opinions held, and must therefore be the expression of one's own point of view. It is safe to say that in American centres to-day probably more prostatic obstructions are relieved by transurethral resection than by any other method. While there is some difference of opinion as to what glands should be treated in this way, there is fairly general agreement with regard to certain indications and contra-indications. Practically all urologists resect transurethrally certain types of bladder neck or prostatic obstruction and the indications and contra-indications vary with:

- (1) Type of obstruction
- (2) State of renal function
- (3) Age of patient
- (4) General condition of the patient.

Type of Obstruction

The majority of types of bladder neck obstruction consist of median bar, median lobe, bi and tri-lobar hypertrophy. All bars and practically all median lobes can be easily and safely resected through the transurethral route. Obstruction due to cancer of the prostate which has failed to be relieved by castration and stilbesterol should also be attacked by this method. Any type of bi or tri-lobar prostatic hypertrophy CAN be removed by transurethral resection, but it is generally felt that the larger glands are best treated by open operation as transurethral resection in these cases, sometimes requires two sittings and is therefore no more time saving. The only means of getting a clear picture of the type of prostatic lesion before operation is by cystoscopy and this knowledge should be gained beforehand in order to judge best which operation will give greatest benefit to that particular patient.

State of Renal Function

This is the most important factor that we have to consider. The function of both kidneys should be accurately assessed before any type of prostatic surgery is contemplated. We do this by means of intravenous dye tests at the time of cystoscopy, by intravenous pyelograms, and of course, by blood chemistry readings. If the function is dangerously diminished, all methods available such as bladder drainage, intravenous fluids, etc., should be employed until the function is stabilized. If the function does not reach normal, then no prostatic surgery is safe, and transurethral resection offers little less danger than any other type of surgery. The amount of surgery contemplated then would depend upon the degree of improvement.

Age of Patient

Some well regarded urologists hold that for the patient in the fifties, transurethral resection for the diffusely hyperplastic gland is not the operation of choice. Their argument is based upon the premise that the patient may have many years to live and that it is better to do an enucleation while he is

in good shape. Further it is argued that in transurethral resection the remaining portions of the gland may hypertrophy and require resection again at a later date. There is something to be said for this position and such relatively young persons demanding to have a transurethral resection should be informed that in several years' time they may have to return and have their resection repeated. Notwithstanding that however, were I to become personally so afflicted, I would request the transurethral procedure and the chance of a repeat, as the procedure of choice; and my reasons for that are found in the lower mortality and particularly the lower morbidity of the transurethral operation. Median bars, which are a common cause of symptoms in the fifties are ideally suitable for the transurethral operation. In fact any other operation is most difficult. Old age on the other hand is not regarded as a contra-indication to transurethral resection. In fact patients of advanced age tolerate the operation almost as well as younger men.

General Condition of the Patient

A patient who has a cardiac lesion or some pulmonary disease and who, it is felt might not do well with prolonged recumbency is best advised to have the transurethral operation. Here the majority will be able to get up in two to three days, and the risk of venous stasis, embolus, pulmonary congestion, hypostatic pneumonia, etc., will thereby be reduced. The heavy obese person, in whom open operation is fraught with mechanical difficulties, is better off with a transurethral resection; for a large fat abdomen or generalized obesity offers no technical difficulty to transurethral surgery. Generally speaking, transurethral resection carries less shock than any other type of major prostatic surgery, and since it can be stopped at almost any stage of the procedure, and if necessary continued after four or five days, it is the operation of choice in poor risk patients. However it is a rare occurrence to have to discontinue the procedure because of the condition of the patient. The shock is rarely that great.

I have not tried here to dogmatize as to what type of operation should be done on various types of prostatic lesions. Prostatic surgery at its best is a hazardous business and one in which dogmatism has no place. No one type of operation can be rightly used to cover all types of prostatic obstruction, and the most successful prostatic surgeon is one who has all the types of operations at his disposal, and decides the one to be done only after he completed his examination and general sizing up of the case.

Dangers of Transurethral Resection

We all know that no operative procedure, regardless of the magnitude, is without some degree of danger. We know also that if a surgeon is aware of the pitfalls of the operation which he is performing, those dangers can be minimized. Some of the talked-of dangers of transurethral resection are a relic of its infancy, when instruments were not so highly perfected and the operators were teaching themselves. These dangers have now practically disappeared.

One still hears however, of two chief dangers as regards operative mortality peculiar to transurethral resection. They are urinary extravasation and excessive haemorrhage. I have now either performed or assisted at over

200 transurethral resections of the prostate, and in that number have seen no cases of urinary extravasation. I have seen only three cases of excessive hemorrhage and these did well after having been taken back to the operating room for further fulguration of the bleeding points. I have not seen a death from hemorrhage, and with the modern electro-surgical unit and the availability and high degree of safety of the blood transfusions, I think such a possibility extremely unlikely. The operative mortality from transurethral resection is lower than from any other type of prostatic surgery. It is due to similar causes but with a lesser incidence.

Summary

Transurethral resection is indicated in median bars, median lobes, glands which are not extremely large, cancer of the prostate with obstructive symptoms, patients with cardiac or pulmonary conditions, obese patients, and generally speaking, patients over the age of 65.

To otherwise healthy patients below the age of 60, and to patients with very large glands, open operation offers the best chances of a *permanent* result. However transurethral resection can be done and if a repeat is necessary it offers no more difficulty and no higher mortality than the original operation.

Patients between 60 and 65 are borderline cases as regards transurethral resection and the decision should be made largely on the findings at cystoscopy, the size of the gland and the patient's general condition.

While any prostate *can* be resected transurethrally, I do not believe that all prostates should be treated by this method. Each case should be considered on its findings, and the decision as to which operation is best suited, should be made only after a thorough urological examination.

By this means, and by the early institution of operative relief, before back pressure has caused permanent and severe renal damage, here the morbidity and the mortality rate of prostatic surgery can be reduced to a minimum.

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Thyrotoxicosis and its Treatment with Thiouracil

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THYROTOXICOSIS is by no means merely a thyroid disease. It is a widespread disorder of some kind in which the thyroid plays a part.

Advances made in the preoperative treatment of this disorder in the past twenty-five years have greatly decreased the operative risk and have largely done away with the need of multiple stage operations.

The introduction of iodine in the preoperative treatment of thyrotoxicosis by Plummer in 1923 markedly lowered the operative risk of this condition. Since then, additional advances have been made. In 1943, the MacKenzies noted that the sulfonamides when used in animals produced a hyperplasia of the thyroid accompanied by evidence of a lowered metabolism. Astwood¹, in his search for a drug which would produce a similar effect but which would be of lowered toxicity so as to allow longer periods of medication, experimented with 106 chemically allied compounds. He found thiourea, its derivative thiouracil and thiobarbital to be the most effective and least toxic of the group. These drugs were all found to produce a hyperplasia of the thyroid and depression of its function. The mode of action of these drugs is by interference with the synthesis of thyroxin.

In France, at the same time, it was noted by Perrault and Bovet² that workers engaged in the extraction of Aminothiazole, which is used in industry for the manufacture of Sulfathiazole, often developed enlarged thyroids while showing evidence of depressed thyroid function; also that one workman who previously had a mild thyrotoxicosis showed marked improvement of all toxic signs with a lowered B.M.R.

It is now known that Thiouracil, which is generally considered to be the most efficacious and least toxic of these drugs, has a marked effect in preventing the formation of thyroxin and that its use in thyrotoxic patients usually results in a definite clinical improvement.

Physiology and Histology

The secretion of the thyroid gland is controlled by the thyrotrophic hormone of the pituitary.³ Excessive production of thyrotrophic hormone causes in turn an over secretion of thyroxine with all the resulting manifestations of hyperthyroidism. The only unknown factor at present, in the causation of hyperthyroidism, is that which stimulates the pituitary to oversecrete thyrotrophic hormone.

The administration of Thiouracil, though it does not effect the primary cause of hyperthyroidism; namely, the factor which stimulates the pituitary to oversecrete thyrotrophic hormone, does inhibit the formation of thyroxin and therefore leads to a remission of the condition. This remission can be made to last as long as Thiouracil therapy is continued. In fact, Thiouracil therapy might be termed a medical thyroidectomy.

The unit of the thyroid gland is the acinus. The normal acinus is lined by low cuboidal cells and contains a moderate amount of well stained colloid

which represents stored thyroxin. The normal iodine content is 2 mgm. per gm. of dried gland.

In the hyperthyroid state, the gland itself is moderately enlarged. The acinus is formed by tall columnar cells, the colloid is scanty. Vascularity is often marked resulting in bruits and thrills over the gland. The iodine content of the gland is reduced, while that of the blood increases.

The iodine treated gland shows a decrease in size, is firm, pale, and non friable with little tendency to bleed at operation. The iodine content is increased in both gland and blood. The acinus is distended with colloid and the cells are cuboidal.

The Thiouracil treated gland is a hyperplastic one. The gland is red, moist, vascular and friable. The acinus is lined by columnar cells with nuclei in the centre and shows only very scanty colloid. The iodine content is reduced. The amount of iodine in the blood declines toward normal.

Treatment with thiouracil combined with Lugol's for the last three weeks preoperatively gives a gland which is not so vascular or friable. The cells lining the acinus are not so columnar, the nuclei occupy the base of the cells. The acinus is full of colloid. It suggests an iodine treated gland.

Outline of Treatment and Results

There have been many extravagant claims in the literature regarding the treatment of thyrotoxicosis with Thiouracil alone; in fact, some have stated that thyroidectomy need only occasionally be resorted to. The general opinion now, however, is that Thiouracil has its place in the preoperative treatment of the severely thyrotoxic patient. Those with only mild degrees of toxicity continue to be prepared with iodine as these cases usually settle down well enough to allow operation without undue risk. The toxic reactions to Thiouracil in reported series vary between 10 and 20%. Therefore, it is unreasonable that a patient who is only mildly toxic, and who will respond satisfactorily to Lugol's therapy should be subjected to the additional risk of Thiouracil. In all types of thyrotoxicosis, however, the clinical improvement is marked. It has done away with the need of multiple stage operations as it has been found that a subtotal thyroidectomy can be done just as easily and with no more danger than a lobectomy. The need for intensive preoperative sedation, and postoperative intravenous therapy has been eliminated. The anaesthetic course is smooth, the pulse and blood pressure remaining steady during the operation. It does away with the danger of postoperative crisis, or "thyroid storm."

The optimum dosage of Thiouracil has been found to be 0.6 gm. daily given in divided doses of 0.2 gm. t.i.d. at 7 a.m., 2 p.m., and 9 p.m. To obtain the desired results this therapy must be continued until maximum improvement has been reached. That is, until the B.M.R. has returned to normal and the clinical condition of the patient is satisfactory. It has been found that roughly one day's treatment is necessary for each percentage elevation of the B.M.R.

It has also been found that those who have hyperthyroidism of long standing, those with very large glands and those who have had previous iodine therapy, on the whole, respond less rapidly.

Unless iodine therapy is given in conjunction with thiouracil, the gland is found to be very friable and to offer great difficulties at operation due to bleeding. It has been the policy in most centres⁴ to administer Lugol's solution during the last three weeks of therapy and to discontinue Thiouracil one week preoperatively. When this course of treatment is used, the gland becomes smaller, firmer and less vascular. The difficulty then is no greater than in an ordinary iodine prepared gland.

One of the disadvantages of Thiouracil therapy is the lengthened period of preparation. Many centres treat only cardiacs in hospital. The balance are treated as outpatients with white cell counts being done twice a week to guard against onset of agranulocytoses.

The improvement in the toxic patient preoperatively is usually marked both objectively and subjectively. There is usually a latent period of one to two weeks before striking improvement is noted. Weight increases, palpitation disappears, tremors lessen and are often entirely abolished. The patients become much less nervous.

The size of the gland following treatment is variable, although usually there is some increase in size. Firmness of the gland is not increased and bruits and thrills remain. When iodine is added during the last three weeks, firmness increases and some decrease in size is noted.

Exophthalmos is not improved^{5 6}; in fact, it usually becomes more marked, though, clinically, it may appear less due to decrease of lid lag and loss of eyelid spasm.

It has been shown that exophthalmos is due to the action of thyrotrophic hormone when it is not counter balanced in sufficient quantity by Thyroxin. Thyroidectomy usually causes increased exophthalmos due to decrease in amount of thyroxin being formed. Exophthalmos can be produced in Thyroidectomized guinea pigs by injection of anterior pituitary extract or administration of Thiouracil. Therefore, it is believed that thyroxin has an antiexophthalmic effect. In like manner; during Thiouracil treatment, thyroxin is not being formed and there is a tendency toward increased exophthalmos as the thyrotrophic hormone is still being liberated in large amounts. For this reason, some advise the administration of desiccated thyroid in doses of .05 to 1 gr. daily in conjunction with Thiouracil after the B.M.R. is returned to normal. It is important to recognize these cases who are liable to develop so-called "malignant exophthalmos" before treatment is instituted. In other words, it is important to decide whether the thyrotoxicosis or the exophthalmos constitutes the greatest menace to the patient. Those who show marked exophthalmos to start with are easy to guard against. It is, however, the patient with the thyrotoxicosis but with few eye signs who is difficult to judge. It has been proven that those who early show swelling of conjunctiva with chemosis are more liable to develop exophthalmos after Thiouracil alone, or in conjunctiva with thyroidectomy, than others.

Patients who have cardiac failure complicating the thyrotoxicosis have to be treated for both conditions simultaneously. Thiouracil will not itself return a fibrillating heart to normal rhythm. Decrease in tachycardia, fall in systolic pressure, and pulse pressure parallel the fall in B.M.R.

The serum cholesterol increases proportionately with drop in B.M.R. It constitutes a valuable means of recognizing onset of myxoedema.

The fall in the B.M.R. is progressive and will return to normal if treatment is continued long enough.

Toxic Reaction

Leukopenia with agranulocytoses—This condition has developed in enough cases to justify a careful selection of those who should receive Thiouracil. Most large series report about 3% developing leukopenia serious enough to warrant discontinuing Thiouracil therapy. The leukopenia is shown as a decrease in total white count accompanied by a neutropenia. Several cases have been reported with anginal signs accompanying the leukopenia. A count below 3500 and a neutrophil differential below 30% is considered the point at which treatment should be stopped.

It is recommended by some that pyridoxine hydrochloride be given intravenously in dosage of 200 mgm. on alternative days as protection against agranulocytoses. It is stated to be the active principle of liver.

The appearance of agranulocytoses may be quite sudden, therefore, the necessity of doing biweekly white counts while therapy is being given. It has been shown as well that the condition may appear up to a week after treatment has been stopped.

If white cells do show an alarming drop with corresponding reduction in neutrophils, Thiouracil should be immediately discontinued and pent-nucleotide given along with pyridoxine.

Skin eruptions are generalized, pruritic, macular, or papular in type. This reaction usually shows itself in the third or fourth week and disappears on cessation of therapy.

Fever reactions usually occur around the tenth day and return to normal on discontinuing the drug. The fever is often accompanied by muscular aches and pains.

Oedema of skin may occur. This usually shows itself toward end of treatment.

One case of periarteritis nodosa⁷ with fatal outcome has been reported as complicating Thiouracil therapy.

That Thiouracil should not be given during pregnancy or to a nursing mother is generally recognized.⁸ One fatal case is reported, the woman dying suddenly during the sixth month of pregnancy. Thiouracil causes hyperplasia of the thyroid gland and retarded foetal growth. It is excreted in large amounts in the milk during lactation and here again should not be used.

Cases

A number of cases have been treated in the Victoria General Hospital with Thiouracil preoperatively. The dosage has been 0.6 gm. daily. The improvement has been marked in all cases, but toxic reactions have been found to be very troublesome. No case of leukopenia or agranulocytoses was encountered. Fever of 102° developed in the tenth day in one case. Pruritic maculopapular rash developed in two cases, one after twelve days, the other after twenty-eight days. Fever and rash cleared up promptly on discontinuing treatment. Several were return cases who had previously had a lobectomy, the results were equally good with these. It was generally found that the criteria of one day's treatment for each percentage elevation in the B.M.R. held true. No cases resistant to the drug were met with, although one woman

had received Lugol's for one year and on admission had a B.M.R. of plus 125 with marked toxic symptoms.

Summary

A step forward has been made in the treatment of thyrotoxicoses with the introduction of Thiouracil. It should, however, be used only in severe cases as the toxic properties of the drug are such as to exclude it from general use. In those cases which show only mild symptoms, iodine is still the pre-operative treatment of choice. During treatment, careful check must be kept on white count as agranulocytoses may develop over a very short period.

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FOR SALE—Surgical instruments belonging to the late Dr. C. A. McQueen, of Amherst, N. S. They can be seen at the office of Dr. A. E. Mackintosh, Amherst, N. S., between 2 and 4 P. M., and 7 and 9 P. M., daily.

Abstracts From Current Literature

TREATMENT OF ADDISON'S DISEASE BY IMPLANTATION METHOD. Kemper, C. F.; *Ann. of Int. Med.*, 1945, 22: 161.

Kemper recommends a daily dose of from 3 to 6 Gm. of sodium chloride and elimination of foods rich in potassium. If the patient is not able to carry on his usual occupation, daily injection of desoxycorticosterone acetate should be begun until the adequate daily dosage is determined. Sodium chloride treatment should be continued. Within two or three months just enough pellets should be implanted to meet the patient's calculated need. It has been determined that one pellet of desoxycorticosterone acetate, weighing 125 mg., when implanted under the skin, gives off approximately 0.5 mg. of the hormone in twenty-four hours. If the patient's daily dosage requirement has been determined to be 5 mg. of the steroid compound, it will require implantation of ten pellets to meet his daily hormonal demands. The sodium chloride treatment should be continued. Pellets should be reimplanted about once a year. De Maio suggests implantation by means of a small trocar and glass rod obturator. The method reduces the length of the skin incision and simplifies the implantation technic. Symptoms that may develop because the implanted pellets fail to regulate the carbohydrate metabolism should be corrected by dietary supervision and supplemental sodium chloride, adrenal extract and additional synthetic hormone.

BONE INFECTIONS TREATED WITH PENICILLIN. Higley, G. B. and Rude, J. C.; *Radiology*, 1945, 44: 115.

Higley and Rude used penicillin in 25 cases of bone infection, in some of which there were old chronic infections; in these the response was not dramatic, although in the majority there was a decrease in drainage, with improvement in the general physical condition. In some of the cases it was possible to do elective surgery concurrent with the administration of penicillin, with no extension of the infection. In the acute cases which proved susceptible to penicillin, clinical improvement preceded the X-ray signs of healing and clinical recovery occurred. The authors present summaries of 6 cases which represent several types of bone infection in which definite improvement followed the use of penicillin. In general the treatment of bone infections with penicillin has been satisfactory. The response varies in individual cases. In most instances the period of active infection was considerably decreased. Roentgenographic studies in the treated cases revealed apparent arrest of the spread of the infection, with little or no sequestration of bone and little or no involucrum. There was evidence of healing, in the form of a reactive recalcification throughout the cortex of the bone, approaching the normal architecture of the bone much more closely than does the ordinary involucrum in osteomyelitis. The area of recalcification was of slightly greater density than normal bone. Since the progress of the infection was apparently arrested

and the reparative process began before extensive spread, sequestration and involucrum had appeared, the resultant and sclerosis was less than has been commonly seen in extensive osteomyelitis.

HYPERTHYROIDISM AND THIOURACIL. Palmer, M. Virginia: *Ann. of Int. Med.*, 1945, 22: 335.

Palmer reports observations on 50 unselected patients treated with thiouracil. Twenty-two of these had received the drug for a minimum of three months, but only 6 had received it for as long as nine months. The only criterion for treatment was that the basal metabolic rate had to exceed plus 30 per cent. Five of the patients had had one or more partial thyroidectomies. Twenty-two patients had received previous treatment with iodine, the results being unsatisfactory. The dosage schedule, which was arrived at without determination of blood concentration, was as follows: 0.1 Gm. of thiouracil every three hours for three days, 0.1 Gm. every four hours for three to six days and then 0.5 Gm. or 0.4 Gm. daily until clinical improvement is sustained. It is probable that 0.6 Gm. of thiouracil is the optimal maximum daily dose. With each dose of thiouracil 10 grains (0.65 Gm.) of sodium bicarbonate was given. All the patients treated during the past five months have received daily 100 mg. of ascorbic acid and also liver extract. Capsules of multivitamin concentrates were given two to three times a day. Every patient now receives thyroxin or desiccated thyroid. The thiouracil treatment failed in none of the patients, but some responded more satisfactorily than others. In general the higher the initial basal metabolic rate, the more dramatic was the response. It is believed that vitamins, sedation and rest enhance the efficiency of thiouracil but have little intrinsic curative properties. There is a trend toward a normal endocrine balance on thiouracil therapy alone, but the restoration is brought about more completely and with less unpleasant side reactions when thyroid substance is given in combination with thiouracil. The patient coming to operation is treated in the same manner as one with simple colloid goiter, with the exception that measures are taken to control the greater vascularity encountered in a thyroid treated with thiouracil.

THIOURACIL IN PREOPERATIVE MANAGEMENT OF HYPERTHYROIDISM. Bartels, E. C.: *Ann. of Int. Med.*, 1945, 22: 365.

Thiouracil has been used at the Lahey Clinic in the preoperative management of 64 patients with hyperthyroidism. Fifty of the patients had primary hyperthyroidism or exophthalmic goiter and 14 patients had adenomatous goiter with hyperthyroidism. The duration of hyperthyroidism ranged from three months to fifteen years. The initial basal metabolic rate varied from plus 21 per cent to plus 98 per cent, the average rate being plus 51 per cent. Fifteen patients with adenomatous goiter were classified as thyrocardiac, having either heart failure or auricular fibrillation without heart failure. When thiouracil is used, maximum improvement must be striven for; patients should not be sent to operation until a normal or nearly normal basal metabolic rate is recorded. Unfavourable results in 2 cases of partial preoperative control with thiouracil has induced the authors to continue daily administration of 0.6 Gm. of thiouracil until the basal metabolic rate is practically normal,

and hyperthyroid symptoms have subsided. Approximately one day of treatment with thiouracil is required for each per cent of elevation in the basal rate. When the first patients receiving thiouracil underwent thyroidectomy, the gland was found to be soft and friable, and bleeding was so extensive that there was difficulty in carrying out the usual surgical technic. The difficulty was overcome when Lugol's solution was administered with thiouracil. Thiouracil is given until the basal metabolic rate approaches plus twenty per cent, when iodine is started. It is continued for three weeks preoperatively, the thiouracil being discontinued one week before operation. This method produced a satisfactory state of involution, as determined at operation and by microscopic examination. Thiouracil is valuable in the preoperative management of hyperthyroidism.

PERIARTERITIS NODOSA AND HYPERSENSITIVITY. Wilson, K. S. and Alexander, H. L.: *Jour. of Lab. and Clin. Med.*, 1945, 30: 195.

Wilson and Alexander analyzed 300 consecutive cases of periarteritis nodosa and found many instances of associated atopy and atopic-like disorders. Particular attention was paid to bronchial asthma, of which there were 54 cases, an incidence of 18 per cent. When differential counts were available, all but 3 of 47 cases of asthma showed a hyper-eosinophilia ranging from 11 to 84 per cent, with an average of 53.5 per cent. This is in contrast to 151 cases without asthma in which there were but 9 instances of hyper-eosinophilia and the average eosinophil count was 2.5 per cent. Periarteritis nodosa appears to be the only evident manifestation which links together all types of human hypersensitivity with the exception of contact dermatitis. This fact points again to the role of the blood vessels in hypersensitive states.

TREATMENT OF SINUSITIS WITH PENICILLIN. Hauser, I. J. and Work, W. P.: *Arch. of Otolaryngol.*, 1945, 41: 161.

Hauser and Work used penicillin in the treatment of 46 cases of sinusitis. Eleven were treated by irrigation of the maxillary antrums with solutions of penicillin, and 35 were treated by intramuscular injection of penicillin alone or in conjunction with radical surgical opening of the sinuses. When penicillin was used in conjunction with adequate surgical treatment of the sinuses, results were far better than before penicillin was available. It is not advisable to abandon surgical treatment, as was proved in three cases of intracranial complication of sinus disease in which penicillin was utilized over long periods and in adequate amounts before surgical intervention was attempted. In these cases operation revealed that the penicillin alone had not cured the sinusitis; following adequate surgical treatment, the sinusitis was rapidly cured. The authors at first gave penicillin weeks after operation in an attempt to reduce the amount of exudate in the nose. Noting the rapid cessation of discharge resulting from the use of penicillin, they began to give it immediately after operation. The results were gratifying in that the discharge disappeared rapidly. In the most recent cases they began the administration of penicillin forty-eight hours before operating on the sinuses. The postoperative reactions were minimal, and rapid and uneventful recovery followed. At present every patient who is to have radical surgical treatment

for sinusitis receives penicillin intramuscularly every three hours for two days prior to operation, and its administration is continued postoperatively until maximum benefit has been obtained.

SUPPRESSIVE TREATMENT OF MALARIA IN MILITARY FORCES. McCoy, O. R.: *Jour. Nat. Mal. Soc.*, 1945, 4: 9.

According to McCoy, atabrine has proved much more effective than quinine for suppression of malaria and, in general, is better tolerated and preferred by troops. A most important experience gained is the demonstration of the effectiveness of atabrine in preventing the development of falciparum malaria. When atabrine is taken in doses of 0.6 or 0.7 Gm. per week during and for several weeks following exposure to falciparum infection, appearance of symptoms is consistently prevented not only during suppressive treatment but also after medication is discontinued. Suppressive doses of atabrine apparently act as curative doses in this type of malaria. In this respect atabrine is far superior to quinine. As a result of the extensive use of atabrine for suppressive treatment, falciparum malaria has been much less of a problem in the military forces than was anticipated at the start of the war. Vivax malaria, on the other hand, is suppressed but not cured by atabrine. Relapses of vivax malaria experienced after the cessation of suppressive medication constitute a major portion of the Army's malaria problem. In units heavily seeded with vivax malaria it may be necessary to continue suppressive treatment in order to maintain military effectiveness even though no further exposure to infection occurs.

EARLY VITAMIN DEFICIENCY. Ruffin, J. M., Cayer, D. and Perlzweig, W. A.: *Gastroent.*, 1944, 3: 340.

In the experience of Ruffin and his associates, glossitis, papillary atrophy of the tongue, cheilosis and peripheral neuritis are the earliest and most reliable evidence of a B complex deficiency. All patients selected for study gave a history of an inadequate diet and had one or more of such indefinite symptoms as weakness, nervousness, anorexia, irritability or vague digestive complaints. All these patients had been ambulatory and for the most part carrying on their usual duties. None of them had any organic disease. There were 26 patients who were classified clinically as having a vitamin deficiency. The following studies were conducted: history, evaluation of diet, physical examination with a neurologic consultation, blood count, total proteins, urinalysis, gastric analysis, proctoscopy and gastroscopy, ileal studies, stool fat, prothrombin time, slit lamp examination of the eyes, glucose tolerance test and determinations of vitamins A and C, carotene, nicotinic acid, riboflavin, thiamine, pyridoxine and pantothenic acid. None of the patients were found to have clinical evidence of vitamin A deficiency; that is, there were no eye changes, night blindness or follicular keratosis. Ten patients in the deficiency group had vitamin A levels below the suggested lower limit of normal, and seven patients had carotene levels which fell below this lower limit. Although pyorrhea was seen frequently, spongy bleeding gums, characteristic of scurvy, were not observed. There were no petechiae and the tourniquet test was negative. There were seven patients in the deficiency group whose blood level

was below the suggested lower limit of normal, five of whom had no measurable vitamin C in the plasma. All patients classified as having a vitamin deficiency had clinical evidence of a B complex deficiency with one or more of the following physical findings: glossitis, papillary atrophy, cheilosis or peripheral neuritis. A comparison of the vitamin levels of the B complex in those with signs of deficiency and in the normal controls revealed striking differences between the two groups in the urinary excretion levels of nicotinic acid, riboflavin and thiamine. The greatest variations were found in the nicotinic acid levels. The levels for pyridoxine showed no significant variation between the normal controls and the vitamin deficiency group. This suggests that in deficiencies of the B complex a pyridoxine deficiency is not likely to occur.

E. DAVID SHERMAN, M.D.

Abstract Editor

THE MEDICAL PROFESSION

The DALHOUSIE MEDICAL BOOK BUREAU is now able to supply you with the latest in MEDICAL TEXTBOOKS, DIAGNOSTIC INSTRUMENTS, HAEMOCYTOMETERS, etc.—by calling or writing us at the Dalhousie Public Health Clinic, Halifax, N. S.

Co-Managers: Mr. J. Frazee
Mr. C. Wright

Proposed Programme

of

Combined Meeting

Dalhousie Medical Faculty Refresher Course

and the

Nova Scotia Division

of the

Canadian Medical Association

October 7th to 11th, 1946, inclusive

NOTICE

Place of clinics (where not stated), Victoria General Hospital.

Place of afternoon lectures, Lord Nelson Hotel.

Two dollars registration fee is chargeable to each one attending the Course. Registration will be at Camp Hill Hospital on Monday morning at 9.00 a.m., following days at the Victoria General Hospital and the Lord Nelson Hotel.

Programme Refresher Course, 1946

MONDAY, OCTOBER 7th, CAMP HILL HOSPITAL

Auditorium in Pavilion C, the nearest approach to which is from Jubilee Road.

Chairman: Dr. C. MacLeod.

9.30 a.m. Clinical Programme by Hospital Staff.

12.30 p.m. Medicine. General Surgery. Urology.

1.00 p.m. Buffet Luncheon.

Inspection of Hospital.

Chairman: Dr. W. A. Curry.

2.30 p.m. "Clinical Electroencephalography."

Dr. W. Leslie.

3.00 p.m. "Liver Function."

Dr. T. M. Sieniewicz.

Dr. K. A. MacKenzie.

Dr. C. M. Harlow.

4.15 p.m. "Varicose Veins."

Dr. J. A. Noble.

4.45 p.m. "Physical Medicine."

Dr. E. H. Anderson.

5.30 p.m. Adjournment.

TUESDAY, OCTOBER 8th

VICTORIA GENERAL HOSPITAL

Chairman: Dr. J. W. Merritt.

9.30 a.m. to 10.20 a.m. Surgical Clinic.

Dr. W. A. Curry.

Dr. E. F. Ross.

10.30 a.m. to 11.20 a.m. Otolaryngology Clinic.

Dr. Howard McCart.

11.30 a.m. to 12.20 p.m. Surgical Clinic.

Dr. A. L. Wilkie.

LORD NELSON HOTEL

2.30 p.m. Executive Meeting of The Medical Society of
Nova Scotia.

Chairman: Dr. G. H. Murphy.

2.30 p.m. to 3.20 p.m. "The Interpretation and Value of Sternal Marrow
Findings in the Diagnosis of Blood Disorders."

Dr. H. E. Taylor.

3.30 p.m. to 4.20 p.m. "The Diagnosis of Subdiaphragmatic Abscess."

Dr. A. L. Wilkie.

4.30 p.m. to 5.20 p.m. "Ear, Nose and Throat Problems in General
Practice."

Dr. Howard McCart.

- 7.30 p.m. Lord Nelson Hotel.
 Defence Medical Association, Military District
 No. 6, "Reorganization;" Address by the D.G.M.S.
- 9.00 p.m. Tea Room, Nova Scotia Hotel.
 Smoker for returned members.

WEDNESDAY, OCTOBER 9th
 VICTORIA GENERAL HOSPITAL

Chairman: Dr. H. D. O'Brien.

- 9.30 a.m. to 10.20 a.m. Medical Clinic.
 Dr. K. A. MacKenzie.
 Dr. J. R. Corston.
 Dr. C. W. Holland.
- 10.30 a.m. to 11.20 a.m. Surgical Clinic.
 Dr. A. L. Wilkie.
- 11.30 a.m. to 12.20 p.m. Otolaryngology Clinic.
 Dr. Howard McCart.

LORD NELSON HOTEL

- 2.30 p.m. First Business Meeting, The Medical Society of
 Nova Scotia.
- 6.30 p.m. Reception.
- 7.30 p.m. Annual Dinner The Medical Society of Nova
 Scotia (Informal).
 Presidential Address.

THURSDAY, OCTOBER 10th
 VICTORIA GENERAL HOSPITAL

Chairman: Dr. E. F. Ross.

- 9.30 a.m. to 10.20 a.m. Gynaecology Clinic.
 Dr. H. B. Atlee.
 Dr. K. M. Grant.
- 10.30 a.m. to 11.20 a.m. Medical Clinic.
 Dr. Francis M. Rackemann.
- 11.30 a.m. to 12.20 p.m. Neuropsychiatric Clinic.
 Dr. John C. Whitehorn.

LORD NELSON HOTEL

Chairman: Dr. J. R. Corston.

- 2.30 p.m. to 3.20 p.m. "Patient's Personalities."
 Dr. John C. Whitehorn.
- 3.30 p.m. to 4.20 p.m. "Classification of Asthma."
 Dr. Francis M. Rackemann.
- 4.30 p.m. to 5.20 p.m. A Neurosurgery Topic.
 Dr. Norman Delarue.
- 8.00 p.m. Second Business Meeting, The Medical Society of
 Nova Scotia.

FRIDAY, OCTOBER 11th
VICTORIA GENERAL HOSPITAL

Chairman: Dr. N. H. Gosse.

- 9.30 a.m. to 10.20 a.m. Symposium on Paediatrics.
Dr. M. H. Carney.
Dr. G. B. Wiswell.
Dr. N. B. Coward.
- 10.30 a.m. to 11.20 a.m. Neuropsychiatric Clinic.
Dr. John C. Whitehorn.
- 11.30 a.m. to 12.20 p.m. Medical Clinic.
Dr. Francis M. Rackemann.

LORD NELSON HOTEL

Chairman: Dr. H. K. MacDonald.

- 2.30 p.m. to 3.20 p.m. An Obstetrical Topic.
Dr. George M. White.
- 3.30 p.m. to 4.20 p.m. "Treatment of Asthma."
Dr. Francis M. Rackemann.
- 4.30 p.m. to 5.20 p.m. "Psychotherapeutic Strategy."
Dr. John C. Whitehorn.

GUEST TEACHERS

- DR. FRANCIS M. RACKEMANN - Lecturer in Medicine, Harvard Medical School, Boston, Mass.
- DR. JOHN C. WHITEHORN - Psychiatrist-in-chief, Henry Phipps Psychiatric Clinic, The Johns Hopkins Hospital, Baltimore, Maryland.
- DR. A. L. WILKIE - - - Assistant Professor, Department of Surgery, McGill University, Montreal.
- DR. HOWARD McCART - - Junior Demonstrator, Department of Otolaryngology, University of Toronto, Toronto.
- DR. GEORGE M. WHITE - Associate Professor of Obstetrics and Gynaecology, Dalhousie University, Saint John, N. B.
- DR. NORMAN DELARUE - Toronto General Hospital.

Correspondence

135 St. Clair Avenue West
Toronto 5, Ontario
August 14, 1946

To the Members of the Executive Committee and the Secretaries of Divisions

Dear Doctor:

The attached copy of a communication from the Director General of Treatment Services, Department of Veterans Affairs, represents satisfactory progress in our recent negotiations with respect to the Family Doctor Scheme. You will note that although Treasury Board approval has been obtained to the Schedule of Fees which was approved by General Council at the recent Annual Meeting, its inauguration must await printing and distribution to the members of the medical profession.

You may feel free to advise your Divisional members of this most recent development in our relationship with D.V.A., with the understanding that the new terms will not become operative until an official communication from the central office of that organization is sent to practising physicians.

Yours faithfully

A. D. Kelly

Assistant Secretary

Department of Veterans Affairs

Dr. T. C. Routley
Secretary
Canadian Medical Association
135 St. Clair Avenue West
Toronto 5, Ontario

Ottawa, Ontario
August 13, 1946

Dear Dr. Routley:

First of all, Treasury Board has given its approval to the Schedule of Fees for which we are all truly thankful here. We can now get them printed and distributed and modify previous Instruction Letters that have gone out about them. Copies of the printed Schedule of Fees and Instruction Letters will be sent to you as soon as they are available.

Yours very truly

(Signed) W. P. Warner, M.B.

Director General of Treatment Services

Halifax, N. S.

June 25, 1946

Col. A. E. Blackett, M.D., C.M.
President
Medical Society of Nova Scotia
New Glasgow, N. S.

Dear Dr. Blackett:

The work of mobilization has now been completed. In looking back over the active years of our operation from September, 1940, I find many happy memories of my association with the members of your society.

In Nova Scotia the private physicians gave freely of their time and knowledge in the war effort. Much of this contribution was made at my request both as Hon. Secretary of St. John Ambulance Association and later as Registrar, N.R.M.A. As Registrar I found examination and other reports to be uniformly reliable and without instance of favouritism. At one time a survey of re-examinations showed a difference with the findings of final medical boards of only about two per cent. The percentage of disagreement between boards was much higher.

I will be glad if you can find an opportunity to convey to your members some expression of my appreciation of what they have done and also my thanks for their many kindness to me personally.

Yours very truly,

Edgar W. Mingo, Registrar
Administrative Division "G"

WANTED

Two resident physicians at the Nova Scotia Sanatorium, September 1, 1946. For further particulars apply to: The Civil Service Commission, Province Building, Halifax, N. S.

Personal Interest Notes

Doctor A. B. Campbell appointed Chief Medical Officer of the Workmen's Compensation Board

LABOR MINISTER CURRIE announced recently the appointment of Doctor A. B. Campbell of Bear River as chief medical officer of the Workmen's Compensation Board. He fills the post left vacant by resignation of Doctor H. L. Scammell, who resigned recently to take a position with Dalhousie University. Born in the colliery town of Westville, he was reared in another Nova Scotia coal mining town, Inverness, where his parents moved while he was still a boy. He attended Pictou Academy and Dalhousie University, leaving college in 1915 to go overseas with the Second Heavy Battery, Royal Canadian Artillery. His service in the First World War ended in 1917. He completed his medical course at Dalhousie in 1921, served on the staff of the Nova Scotia Sanatorium for part of a year, then went on to Bear River to start practising his profession in earnest. For twenty-four years, until June, he lived in the little western Nova Scotia town. He was a general practitioner. Doctor Campbell has taken a very active part in medical affairs of the Province. He served on the staff of the Digby General Hospital. In 1940-41 he was President of The Medical Society of Nova Scotia. He was also a member of the Valley Medical Society and the Western Counties Medical Society.

Doctor W. A. Curry appointed Head of the Department of Surgery of Dalhousie Medical School

Announcement is made of the appointment by the Board of Governors of Dalhousie University of W. Alan Curry, B.A., M.D., C.M., as head of the Department of Surgery in the Dalhousie Medical School. Doctor Curry received his early education at King's College School, graduated in Arts from Dalhousie University, and received his medical degree from McGill in 1909. Since graduation he has taken extensive post-graduate work both in England and in the United States. Doctor Curry is a Fellow of the Royal College of Surgeons of England and also of Canada.

Doctor C. H. L. Baker who some years ago was on the staff of the Victoria General Hospital has again received appointment to the staff of that institution. Doctor Baker graduated from Dalhousie Medical School in 1935 and at the time of his enlistment was practising at Middle Musquodoboit. He plans to carry out private practise in Halifax being specialist in anaesthesia, and on the hospital staff will be associated with the department connected with that branch of profession.

The marriage took place in Halifax on July 5th of Miss Barbara Frances Wagstaff, daughter of Mr. George E. Wagstaff, Port Greville, and Doctor Henry Kenneth Hall, son of Mr. and Mrs. T. Roy Hall, of Vancouver. Doctor Hall attended the University of British Columbia and graduated from the Dalhousie Medical School in 1944. He recently received his discharge as a captain with the R.C.A.M.C., and is at present on the staff of the Department of Psychiatry of Dalhousie Medical School.

Doctor A. K. Roy, who graduated from Dalhousie Medical School in 1944, and served with the Royal Canadian Navy after graduation, has received an appointment in Dermatology at the Medical Branch of the University of Texas in Galveston, Texas.

The marriage took place in Halifax on July 11th of Miss Harriet Ann Glube, only daughter of Mr. and Mrs. J. C. Glube, Halifax, and Doctor George Bernard Rosenfeld, son of Mr. and Mrs. L. Rosenfeld of New York. Doctor Rosenfeld graduated from the Dalhousie Medical School in 1945 and will practise in New York.

Doctor and Mrs. L. M. Morton of Yarmouth recently spent several weeks in the Canadian West with their son, Captain Ray Morton and Mrs. Morton. En route to the Coast Doctor Morton attended the annual meeting of the Canadian Medical Association at Banff.

The BULLETIN extends congratulations to Doctor and Mrs. J. R. Kerr of Annapolis on the birth of a daughter, Marilyn Ann, on June 19th; to Doctor and Mrs. E. L. Thorne of Calgary on the birth of a son on July 9th; to Doctor and Mrs. R. G. Wright of Elmsdale on the birth of a son on July 12th; to Doctor and Mrs. G. G. Simms of Pictou on the birth of a son, Michael McManus, on July 20th; to Doctor and Mrs. T. C. C. Sodero, Truro, on the birth of a daughter, Mary Constance, at the Halifax Infirmary, on July 27th; and to Doctor and Mrs. R. M. Caldwell of Yarmouth on the birth of a son on July 29th.

Doctor A. E. Kerr, the President of Dalhousie University, recently announced the appointment of Doctor R. W. Begg to be assistant professor in the Department of Biochemistry and Doctor D. J. Tonning to be assistant professor of Medicine. Doctor Begg received his Bachelor of Arts from Dalhousie in 1936, and his Master of Science in Biochemistry, also from Dalhousie, in 1938. He graduated from the Dalhousie Medical School in 1942. Following graduation Doctor Begg joined the Royal Canadian Medical Corps and served with the Paratroopers. Since the cessation of hostilities he has been studying at the University of Oxford working towards the degree of Doctor of Philosophy.

Doctor Tonning graduated from the Dalhousie Medical School in 1938. Since that time he has taken special courses in Harvard and Chicago Universities, and has pursued his studies in the Royal Victoria Hospital, Montreal, and in the Massachusetts General Hospital, Boston. He is an Associate of the American College of Physicians. Since graduation he has been practising in Saint John.

Doctor A. H. Mercer, who graduated from the Dalhousie Medical School in 1944, and since that time has been specializing in Pathology at the Montreal General Hospital, has been appointed Assistant Pathologist to the three Regina hospitals combined.

Doctor T. C. C. Sodero, a graduate of Dalhousie University, who was formerly located at Guysborough, has established himself in Truro.

The BULLETIN extends congratulations to Mr. and Mrs. Murray V. Jones (nee Beatrice Simpson) on the birth of a daughter, Lesley Patricia, at All Saints Hospital, Springhill, on July 27th, a grand-daughter for Doctor and Mrs. H. L. Simpson of Springhill.

Obituary

THE death occurred at Arichat on June 29th of Doctor Benjamin Amedée LeBlanc after an illness of seventeen months. Doctor LeBlanc was born at Arichat on February 4, 1879, a son of the late Captain and Mrs. Benjamin LeBlanc. He received his early education in Richmond County and graduated from Dalhousie Medical School in 1907. During the First Great War Doctor LeBlanc held the rank of Captain in the medical corps. After demobilization he returned to Arichat where he practised for more than thirty-nine years. He was a member of the Provincial Legislature for twelve years, being first elected in 1916. From 1923 to 1928 he was minister without portfolio in the cabinet of the late Hon. E. N. Rhodes. Doctor LeBlanc is survived by his wife, the former Euphemia B. McMillan, one sister and one brother.

The BULLETIN extends sympathy to Doctor J. G. MacDougall of Halifax on the death of his wife which occurred on August 5th after an illness of considerable duration. The BULLETIN also extends sympathy to Doctor F. A. Dunsworth of Halifax on the death of his mother, Mrs. E. T. Dunsworth, which occurred on August 12th. Mrs. Dunsworth had been in ill health for several years.

The death occurred suddenly following a heart attack, at Truro, on August 10th, of Doctor Frank Daniel Charman. His unexpected passing came as a deep shock to a wide circle of friends in Truro and vicinity and throughout the province.

A native of Wallace, Doctor Charman went to Truro about twenty years ago. He graduated from McGill University in 1904 and practised in Wallace before going to Truro. He was highly respected for his kind, friendly nature, especially among the younger doctors who went to Truro to practise, and who received his ready, helping hand.

The late Doctor Charman lived quietly, his whole life was taken up in his work and in his family. He was keenly interested in the health of the community and in the hospital.

Survivors include his wife, the former Harriet Flynn of Wallace, two daughters, and a son, Frank, a student at McGill University, and a number of brothers and sisters.

The funeral was held from his home on August 12th.



Promiscuity—A Psychiatric Study

The most recent contribution to the control of venereal disease comes from the field of psychiatry. Evidence presented in "An Experiment in the Psychiatric Treatment of Promiscuous Girls" carried out in San Francisco indicates that the application of psychiatric and social work techniques may be a signal advance towards the solution of the venereal disease problem.

An intensive study of 365 patients, all promiscuous or potentially promiscuous, between the ages of 18 and 25, led to the determination of suitability and desirability to consider psychiatric treatment. Of the original group, 229 were considered suitable for and willing to accept the treatment offered.

In the treatment, the first step was to help the patient deal with the more superficial and material aspects of her problem. The patient was then given advice and, where necessary, assistance in troublesome home and family problems. She was also advised with respect to occupational and recreational activities.

In addition the psychiatric worker functioned as a sympathetic counsellor to the patient. This was an extremely important factor in that many of these patients had no one else in whom they could place trust.

The appraisal of the results of treatment presented many difficulties, but, as outlined, were interesting and encouraging. Six months from the date of commencement of treatment was taken as a fixed period over which to ascertain the degree of success which was measured in diminution or cessation of promiscuity.

Complete follow-up was achieved in only forty per cent of the treated cases. Of these, ninety per cent were known to have shown marked improvement with reference to promiscuity. Fifty per cent of those checked were stated to have stopped sexual contact entirely except within marriage.

A study of the motivation of promiscuity discredited two hitherto widespread beliefs, i.e., financial gain and sexual desire. Other explanations, therefore, had to be discovered. The chief common denominator in the personality of promiscuous women was found to be emotional immaturity. In the occasionally promiscuous group affection or circumstances played an important part while in the habitually promiscuous, the girl was generally found to be either in the throes of an emotional conflict, dependent by nature, or grossly maladjusted. To her, promiscuous sexual conduct was a method of gaining the security that she lacked.

From a study of these motivating factors it was postulated that personality adjustment and psychiatric treatment would be of extreme value in the prevention of venereal disease.

The Present Status of Penicillin in Syphilis Treatment

In view of the current wave of enthusiasm regarding the use of penicillin in the treatment of syphilis, an Editorial appearing in the May, 1946, issue of *The Journal of Venereal Disease Information* would appear to be most appropriately timed. To emphasize the present status of this therapy, excerpts from this Editorial are presented.

"It cannot be repeated too often nor too emphatically that penicillin therapy of syphilis is still an experimental procedure. This is true because of the prolonged course of the disease and its tendency to recur after periods of latency, and applies with equal force to any new treatment, drug or procedure. Organized, coordinated methods of study and observation enlisting the help of clinicians, laboratories, and institutions undoubtedly speed up evaluation, but there is still a minimum period of 5 years of continuous observation on several thousands of patients which is absolutely necessary before final conclusions can be drawn."

The Editorial continues by enlarging upon the incomplete state of our knowledge concerning penicillin therapy, discussing the recent discovery that some penicillin seemed to have become less effective in the treatment of syphilis. Scattered reports to this effect by various clinicians and other agencies interested in the treatment aspects of syphilis control, confirmed in experimental animals by responsible investigators, during February, 1946, led to the conclusion that the situation should be promptly appraised.

Accordingly, a meeting was called during March at which all interested agencies were present. From this meeting it developed that the "K" fraction of penicillin predominated in the less effective product whereas the "G" fraction had predominated in the earlier products which have given much better results. It was agreed by manufacturers that an effort would be made to produce penicillin in which the more effective "G" fraction predominates. In addition, greater attention will be given, in research, to determining the effectiveness of the various fractions of penicillin.

The early recognition by clinicians that penicillin therapy for gonorrhoea required continued observation to guard against the possibility that the subcurative penicillin dosage might have suppressed or aborted a concomitantly acquired syphilis infection leads to the possibility that something of the same situation applies to syphilis patients treated with penicillin in which the aberrant "K" fraction predominated—they may have received what was, in effect, a subcurative dosage.

This observation should remind physicians of the importance of explaining to every patient, regardless of the drug and treatment schedule used, the necessity for completing treatment and for periodic examinations. With any new type of therapy this becomes an obligation on the part of the physician to the patient, to the public and to the advancement of medical science.

It was noted that the likelihood of intensive follow-up on most of the patients treated for syphilis with penicillin is optimistic since many who are properly instructed on the importance of this phase of their treatment will report voluntarily and consistently for their diagnostic check-up.

Placing emphasis upon an important feature, the Editorial continues:

"We reiterate that much remains to be learned about penicillin, its composition and mode of action, and its ultimate place in the treatment of syphilis. Despite the most encouraging clinical evidence of its very real value in sterilizing early lesions, and its great apparent usefulness against syphilis in pregnancy, and central nervous system syphilis, it cannot yet be said that penicillin is more effective than arsenical-bismuth therapy from the standpoint of producing "cures." Several years of observation on several thousands of patients treated under the various schedules will be necessary before a dependable evaluation can be made."

In conclusion it is noted that the experience with penicillin species "K" emphasizes the interdependence of industry, laboratories, treatment sources, and public and private agencies in promoting the control of syphilis.

WANTED

An X-ray and Laboratory Technician for a small general hospital. (Nurse preferable). State qualifications and salary expected and apply at once to:

William H. Harris,

Secretary, Board of Trustees,

Sutherland Memorial Hospital,

Pictou, N. S.