

## EVALUATION OF ANESTHETIC, SURGICAL AND OBSTETRICAL RISK IN PATIENTS WITH HEART DISEASE

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From reading recent publications, lectures, and to a slight extent from my own experience, I shall endeavour to present a concise and, I hope, workable framework, whereby the cardiologist may give, with some authority, an opinion to the surgeon and obstetrician as to the probabilities of the risk involved when the cardiac patient is presented for anaesthesia, surgery, and in pregnancy.

### HEART DISEASES SIMULATING SURGICAL CONDITIONS

It is well to recall that certain forms of heart disease may closely simulate surgical conditions.

*Rheumatic Fever*, in children, may be accompanied by abdominal pain, fever, leucocytosis, nausea and vomiting and peritoneal effusion. In the absence of joint pains the picture closely resembles that of appendicitis. To quote Dr. Samuel Levine:—

“Inasmuch as there is no specific test for either condition, at times it will be necessary to perform an abdominal exploration to be sure of the diagnosis, for it is safer to find an occasional normal appendix than to overlook appendicitis that develops into a fatal peritonitis.”

Careful enquiry may, however, reveal that the child has been subject to epistaxis or previous known attacks of rheumatic fever. The family history may be positive. Residual evidence of rheumatic fever may, upon occasion, still remain—mitral, presystolic and diastolic murmurs or aortic diastolic murmur.

*Pericarditis* may present similar symptoms. There the characteristic friction rub must be sought for. Pericarditis may also simulate diseases of the oesophagus, pleurisy and mediastinal pathology.

*Acute Heart Failure* may present the picture of gall bladder disease, intestinal obstruction, neoplasm of the liver and pelvic disorders. I recall such a case in which malignancy of the liver was suspected; with low salt diet, mercurial diuretics and digitalis, the enlarged, tender liver soon shrank beneath the costal margin, with complete relief of pain and distressing G. I. symptoms.

*Myocardial Infarction* may closely resemble peptic ulcer, acute pancreatitis, acute gall bladder disease, pulmonary emboli or emboli in abdominal viscera.

### CLASSIFICATION OF CASES

\*“*Elective surgery is contra-indicated in the presence of:—*

- (1) Acute rheumatic fever
- (2) Impending myocardial infarction
- (3) Acute myocardial infarction
- (4) Congestive heart “failure”
- (5) High degree of AV block with Adams-stokes syndrome.



\*\*“*Electric surgery may be undertaken with added risk in:—*

- (1) Chronic angina pectoris
- (2) Post-convalescent myocardial infarction
- (3) Aortic stenosis
- (4) Luetic heart disease

\*\*\*“*Surgery may be undertaken with only slightly added risk in:—*

- (1) Asymptomatic heart disease
- (2) Asymptomatic hypertensive heart disease
- (3) Congenital heart disease—well controlled
- (4) Thyrotoxicosis—well controlled
- (5) Auricular fibrillation and flutter—well controlled with digitalis.
- (6) First degree AV block

As a general observation we may mention that surgery may be performed in any cardiac condition as a life-saving measure.”

### PREPARATION OF THE CARDIAC PATIENT FOR SURGERY

In the pre-operative approach every effort should be made to determine the exact cardiac condition present in order that the proper treatment may be instituted should an emergency occur. Here one should enquire particularly whether or not the patient has been taking digitalis.

When operations on the neck are to be undertaken, we should test for *carotid sinus sensitivity*.

History of previous attacks of *paroxysmal auricular tachycardia* may explain a sudden collapse accompanied by a very rapid pulse during an operative procedure. Pre-operative treatment with digitalis or/and quinidine, may effectively prevent such an occurrence.

Knowledge of the pre-operative existence of other arrhythmias—*auricular flutter, fibrillation, extra systoles* and *heart block* will guide the hand of the therapist in an emergency.

*Congestive Heart failure* should be well controlled with low salt diet, digitalis and diuretics. May I again remind you that prothylactic digitalization, without some specific indication, is not necessary and may be harmful.

*Reassurance* does much for any surgical patient and this is particularly true in the case of the cardiac.

*Thyrotoxicosis* must be adequately controlled by a course of pre-operative medical management with propylthiouracil, iodine, etc.

The *fibrillator* must, of course, be controlled before operation, with quinidine or digitalis. Should such a patient be reverted to a normal rhythm before operation, a maintenance dose of quinidine is continued during, and for at least several days following the surgical procedure.

Numerous extra systoles will frequently be controlled with quinidine, potassium salts, occasionally digitalis, and pronestyl (procaine amide).

*Dehydration, acidosis, hyperglycemia* and *anaemia* should be treated before surgical intervention. The latter may require treatment during, or following operation.



**EMERGENCY TREATMENT OF THE HEART DURING OPERATION**

*Carotid sinus syndrome.*—Operations about the neck particularly, may precipitate a bradycardia or cardiac stand-still. Should undue slowing occur the surgeon must be informed of the change, marked bradycardia with faintness or syncope may be relieved by full doses of atropine (Gr. 1/60). (Dr. S. Levine) Epinephrine may be given subcutaneously, intravenously, and in cases of cardiac standstill, intracardially, though direct cardiac massage is the most effective measure.

\*“During ordinary anaesthesia, premature beats, paroxysmal atrial tachycardia, and disturbances of the sinoatrial pacemaker have been noted by electrocardiologic study to be common.”

“These are particularly common with chloroform and cyclopropane. In experimental animals the latter two have been shown to produce ventricular fibrillation and death. Usually, however, these irregularities are transitory and are not of serious concern. Collapse and death during anaesthesia or surgical operation is rarely due to heart trouble; it is almost invariably due to shock from haemorrhage, infection, trauma or other cause.”

Paroxysmal tachycardia may cause alarm by the extremely rapid heart rate, but it usually subsides without treatment and sometimes dramatically following carotid sinus pressure. Recently it has been shown that Procaine 0.1% intravenously is helpful in preventing or controlling ectopic tachycardia.

Anginal pain may occur during or following operation. Here we may use nitroglycerin, morphine and again insure a free airway with added oxygen.

Acute dyspnoea, including pulmonary oedema, is treated with morphine and atropine, aminophyllin, intramuscularly or intravenously, oxygen, tourniquets, and the head of the bed should be raised.

**POST-OPERATIVE COMPLICATIONS**

Ascites

Pleural effusion

Atalectasis

Pulmonary emboli

Phlebitis

Abdominal distention

Blood loss.

Dehydration

Excessive hydration, especially if sodium chloride is used I.V.

Paroxysmal rapid heart action

Urinary obstruction

Abnormally low blood pressure and shock

Infection

Uncontrolled diabetes with acidosis

Hypoglycemia

Failing renal function

Coronary thrombosis

Subacute bacterial endocarditis, here when surgery has been undertaken, in the presence of infection, even an infected tooth, penicillin should be administered pre-operatively. Congenital defects and valvular lesions provide a



particularly vulnerable field for the implantation of the streptococci and other organisms responsible for S.A.B.E.

### CHOICE OF ANAESTHETIC, ETC.

A good anaesthetist is of prime importance.

*Ether* is satisfactory in most cardiacs, excepting those who have pulmonary congestion.

*Gas-oxygen*, may be used for short procedures but should not be continued for long periods. Patients with heart disease will tolerate high grades of anoxia for a short time, but do not do well with a low grade anoxia over a long period.

*Cyclopropane* in expert hands is a good anaesthetic, except in thyrocardiacs, and those with arrhythmias, or these in whom they are likely to occur. This agent should not be used where adrenalin may be necessary.

*Pentothal* depresses respiration and may precipitate laryngeal spasm. Oxygen should be given before the operation and the anaesthetist must be prepared to give oxygen freely by intubation if necessary. I believe it is good practice to insert the tracheal tube before the surgical procedure is undertaken.

*Avertin* may produce arrhythmias, hence is not satisfactory when these already are present or when adrenalin may be necessary.

There is no particular objection to *regional anaesthesia*, but adrenalin is to be omitted in the presence of angina pectoris and hypertension.

*Spinal anaesthesia* is valuable in cardiacs. Here the B. P. must be carefully watched. (Neosynephrin or paredrine should be at hand)

During anaesthesia, assure a free airway together with adequate supplementary oxygen. During operation, observe the color of the blood in the tissues. Maintain blood pressure, when necessary, with pressor drugs that do not precipitate arrythias, as Paredrine (mgm 10-20 intramuscularly or mgm 10 intravenously) and Neosynephrin (mgms 3-5 intramuscularly or mgms. 0.5 intravenously). Should arrhythmias occur, the anaesthetic agent may be changed.

### THE CARDIAC IN PREGNANCY

At Boston Lying-In Hospital statistics have been recorded from a large series of cardiacs, which provides valuable information in the management of the cases.

Dr. B. E. Hamilton uses the following classification:

1. Unfavorable.
  - a. Those who present signs or history of heart failure.
  - b. Those who have a dangerous disorder of the heart, such as auricular fibrillation.
  - c. Cardiacs who have a complicating serious disease.
2. Favorable.
  - a. Cardiacs who do not have any of the above criteria.

In the favorable group (mortality 2.5%), with ideal care and co-operation,



interruption of pregnancy will rarely be indicated. In the unfavorable group (mortality 16.7%), termination of the pregnancy will occasionally be necessary.\*

During the first few weeks of gestation, a Dilatation and Curettage is a simple and relatively safe procedure. After the third month, however, Dr. Hamilton has shown that abdominal hysterotomy gives the lowest maternal mortality.

From the sixth to the eighth month there is a steady *increase* in the basic "load of pregnancy." After the eighth month there is a steady decrease in the "load." From these observations this fact becomes apparent, that delivery should not be attempted, if avoidable, during the early part of the third trimester.

At term, in a well conducted pelvic delivery, there is a slight and very temporary increase in the "load of pregnancy" on the circulation. Caesarean section, at or near term, is seldom if ever indicated because of heart disease alone. If there exists some purely obstetrical reason, such as disproportion or placenta previa, the technique for operation does not differ from that in general obstetrical practice.

Good pre-natal care is of paramount importance. The expectant mother should be seen frequently, and carefully checked at each visit for symptoms and signs of cardiac complication or other disease such as an acute infection, that potentially aggravates the existing cardiac pathology. She should be given careful instruction re symptoms of impending complications; and should these occur, she should be advised to communicate at once with her physician. Psychologically she must be well prepared for the delivery. The regulation of diet and avoidance of fatigue are of prime importance.

During the first stage of confinement barbiturates, hyoscine and other drugs, that may produce or increase the excitement, are better avoided. Demerol, morphine and rectal instillations of ether in oil are more satisfactory.

Open ether or closed ether with an adequate supply of oxygen carefully and skilfully administered by a competent anaesthetist, is the safest anaesthetic (Irving)\*

The patient is instructed not to strain with the "pains." Low forceps are used during the third stage in order to make the delivery as easy and short as is consistent with good obstetrical practice.

Other observations that are recorded above under the heading "Preparation of the Cardiac Patient for Surgery," also apply to the obstetrical patient.

### SUMMARY

(1) A careful differential diagnosis must be made between certain cardiac conditions and acute surgical emergencies.

(2) The importance of the *preparation* of the cardiac patient for surgery is stressed.

(3) Treatment of cardiac emergencies that may arise during and following operation are discussed.

(4) Certain post-operative complications may occur and should be carefully sought.

(5) Some points on the choice of, and administration of anaesthetics are mentioned.

(6) Statistical survey permits classification of surgical and obstetrical patients into relatively favorable and unfavorable risks.

(7) Some observations have been made on the preparation of the cardiac patient for confinement.

(8) During the first stage of labor, demorol, morphine, heroin, rectal instillations of ether are drugs of choice, rather than barbiturates, hyoscine, etc.

(9) Ether is the safest anaesthetic for the confinement of the cardiac patient.

#### LEGEND

Dr. Samuel Levine, Boston.

By personal communication with Dr. Louis Wolff, Boston.

Dr. Paul White, Boston.

Dr. B. E. Hamilton, Boston.

Dr. F. C. Irving, Boston.



# NURSING IN CIVIL DEFENCE

Evelyn A. Pepper\*  
Halifax, N. S.

MAY I take this opportunity to thank the Programme Committee for inviting me to address this meeting. I was pleased to accept their kind invitation for two reasons: (1) I believe one of my responsibilities as Nursing Consultant of the Civil Defence Health Planning Group is to keep professional associations, such as this, informed on matters relating to nursing in Civil Defence; (2) I could not imagine spending Labour Day in a more delightful way than by motoring from Halifax to Yarmouth.

I am assuming, wisely I hope, that everyone here to-day has had some orientation into the Civil Defence Health Services programme for Canada. You have realized no doubt that its strength lies in its uniformity and the fact that it harbors no boundaries, either provincially or internationally. The Civil Defence Health Planning Group and the myriad of professional and technical consultants responsible for our Health Services programme, have strived to develop a sane, objective, panic free approach to mass disaster, be it a national disaster such as fire or flood or a provoked disaster such as war. In other words, Civil Defence Health Services planners are convinced that unless we prepare for the worst we have little right to hope for the best.

Generally speaking, we are very prone to take the planning and the security which these plans offer to us, for granted. Many Canadians assume, for example, that if this country were attacked, the tri-services, the Army, Navy and Airforce would be responsible for our protection when actually we civilians would be responsible for ourselves. A senior civil defence official has stated that there are three vast areas of responsibility in Civil Defence planning and he lists them in the following order of priority; The first, is *individual responsibility*—it is your responsibility and mine to learn all we can about Civil Defence so that we may avoid becoming casualties ourselves. Secondly—the *health and welfare services* are the first called upon and the most heavily taxed services in any disaster. Once again you and I are involved. As exponents of health services one of our duties is to teach others “self-help” or how to care for themselves in disaster as well as how to assist their neighbour. Thirdly, the *areas of government*—local, provincial and federal governments have great responsibility to assume but the main operational responsibility must fall on our local municipal governments, those which maintain our cities—Cities are made up of people, therefore, in the final analysis the success of Civil Defence planning will rest on individuals. It will rest on you and on me. It is a personal matter—a personal responsibility. Therein lies the seamy side of Civil Defence. It brings to my mind a little prayer, and it is this—“Dear Lord, Help us to make this a happier and safer world in which to live and begin with me.”

We have lulled ourselves into another illusion regarding our security—that we are immune to national disruption because the icy wasteland of the north provides such an impenetrable natural defence and our mighty oceans offer so much protection. Actually one of the great differences in the Canadian security scene to-day is that the natural geographic defences we are depending on are gone. Due to the advance of science those vast miles of geographic

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\*Nursing Consultant, Civil Defence Health Planning Group; paper presented at the September meeting of the Atlantic Branch, C.P.H.A.



defence have been reduced to minutes. The extraordinary fete accomplished by jet planes this past week illustrate the insignificance of space in our time.

In this, the most warlike century of all time we are not sufficiently aware of the changing scene or the need for careful planning and preparation to guard our national security—our democracy—our freedom.

It is obvious that Canadians must develop an awareness of their national security and the part each must play in the new pattern to maintain it, which is called "Civil Defence." There are many definitions for civil defence such as "self preparation for self-preservation" but I think of it as an antidote to any disaster be it natural or provoked. We know that through good preventive medicine we can reduce sickness; we also know that through proper pre-emergency planning we can reduce casualties in the event of mishap; experience has shown us that by good pre-emergency preparedness casualties, such as occurred from high explosive bombing of Britain during the last World War, can be reduced by fifty per cent. In fact, if the antidote is sufficiently potent there is always the possibility that its strength might change the decision of a potential enemy to attack our land.

In the years 1939-1940 the governments of Poland, Holland, Belgium and France capitulated quickly to save their civilian population, who were unsupported by any form of civil defence, from severe aerial attack. The English Channel, the doorstep to Britain, lay open. We will never know why our enemy stopped their advance at that point. Who knows but that the strength of Britain's civil defence loomed as a sufficient bulwark to influence the decision of the enemy not to attack. May I remind you of Mr. Churchill's powerful words in those dark days of 1940, in commending the civilian population for their whole-hearted co-operation and steadfastness to duty under severe aerial attack. "We would rather see London in ruins and ashes than that it should be tamely and abjectly enslaved."

In the nursing profession, individually and collectively we are organizing soundly and progressing well. Just one year ago we published a manual of instruction on "Nursing in ABC Warfare." In the early Fall, we organized a teaching team of three nurses, a doctor and a physicist which travelled across Canada and in seven consecutive weeks gave four day courses to potential nurse instructors in seven centres; namely, Halifax, Montreal, Toronto, Winnipeg, Regina, Edmonton and Vancouver. In this way over 600 nurse instructors were prepared to teach other nurses the full instructors course and we now have over 1,000 nurses prepared to teach nurses generally the nursing implication of modern warfare and mass disaster. Through their combined efforts over 18,000 Canadian nurses have received a shorter course of twelve hours instruction. Of necessity these courses must be repeated and repeated until every nurse in Canada is familiar with the role the nurse would assume in the event of a national emergency. In every province of Canada, with the exception of Ontario, where the largest nurse population is concentrated, and in New Brunswick where there are only 30 instructors to teach 1,500 nurses, we feel we have sufficient instructors. Ontario Civil Defence Health Services are conducting an instructors course in Toronto this month. They will then have approximately 400 instructors to teach their 20,000 nurses. In New Brunswick this month the Registered Nurses Association are presenting a demonstration on "Casualty Care in Mass Disaster" which should prove a real stimulus to their teaching programme.



For some time to come, teaching will be our major professional responsibility to the Civil Defence programme. We are not only responsible for teaching nurses but also the certified nursing assistant group and giving four hour instruction on Nursing in Civil Defence to volunteer nursing auxiliaries, in conjunction with their 16 hour home nursing programme. I cannot praise the nurse teachers too highly. They have accepted their responsibility willingly and in all instances on a voluntary basis. We are trying to relieve them of some of their responsibility by pressing the Curriculum Committee responsible in the provinces to include Nursing in ABC Warfare in the basic curriculum for student nurses and certified nursing assistants. In those provinces where there is a full time Nursing Consultant to the Provincial Civil Defence administration, problems such as these are expedited in reasonable time. For instance, Manitoba and British Columbia have already accepted our suggestion and every nursing school in these two provinces is supplied with teaching manuals, charts, slides and other teaching aids will be forwarded to them as they are developed. We expect that Ontario and Alberta will adopt the same policy shortly. You are correct in assuming from what I have just said, that there is a nursing consultant in each of these provinces. I feel that such an appointment on either a full-time basis in the highly populated provinces or on a part-time basis in the smaller provinces is essential. To have a direct representative from the profession acting on the Provincial Civil Defence Health Services Committee who can devote her time to co-ordinating and integrating nursing plans for Civil Defence, as well as establishing effective liaison and co-ordination of programme, with the professional nurses associations, the Canadian Red Cross and the St. John Ambulance Association, is essential to the progress of our national planning.

The St. John Ambulance Association and the Canadian Red Cross Society are working very closely with the Nursing Advisory Committee to the Civil Defence Health Planning Group on the training of large numbers of volunteers in home-nursing. The Hon. Paul Martin, once stated that 200,000 volunteer auxiliary nursing personnel would be required. At present these two organizations are together training about 12,000 persons a year. In order to step up their training programme they have agreed upon, and circularized, a 20 hour course of instruction which includes 4 hour's instruction in nursing in Civil Defence. Realizing that many of these volunteers should have practical hospital experience, the Nursing Advisory Committee asked the Department of Veterans Affairs to conduct a pilot study on this phase of the training of volunteers. This was conducted over a six months period at Sunnybrook Hospital. The findings are now available and a memorandum is being prepared for the Provincial Co-ordinators and Directors of Civil Defence Health Services giving them as much direction as we can regarding the recruitment, enrolment and training of volunteers in home nursing and the assignment of selected trainees for hospital experience. Although it has been estimated that 60 per cent of all Civil Defence volunteers will need to be women, *in health service* approximately 75% will be women. This is a high percentage and a staggering responsibility for those who are responsible for their training. Again I repeat, preparation of personnel is one of our heaviest responsibilities. But the nurses of Canada are doing this well!

Another major project which is presently under way is to estimate the actual nurse power of any one locality or province because conscientious civil defence planners everywhere are disturbed by the deficits of nursing personnel to meet their civil defence needs. We believe we can relieve the apparent



shortages considerably. We believe that the proper answer to the problem is to initiate an inventory of our nursing resources in each province. Therefore, in Manitoba, next month we are conducting a pilot study to determine the best techniques to be used in an effort to unearth our latent nurse strength. During the last week in October, we are asking every nurse in the province to "step up and be counted." We have prepared a personal record which each registrant will sign after the interviewer has obtained all the information. The success of the inventory will be measured by the number of retired, inactive, married and presently unknown nurses in the province who are counted.

Now that the first phase of the Action Programme is being developed "team" participation will soon be necessary. The "team" concept is not new to any of us. In Civil Defence health services, it is the closely integrated and interdependent service of doctors, dentists, pharmacists, sanitation officers, nurses, morticians, technicians and auxiliary personnel to perform a certain function. Whether the function is simple or complex the result is dependent on the individual effort of each member of the team. In a major disaster "teamwork might well be the keynote to survival."

Under normal conditions the role of the nurse on the health team is clearly defined. But in mass disaster or war little remains normal and like most things the role of the nurse would change considerably. For instance, she would necessarily have to become more flexible in her professional responsibility and at the same time interpret and assign nursing duties to co-workers with little or maybe no training. Her routine nursing duties would necessarily be sharply reduced—for instance, records would become minimal. She would have more and different administrative duties: for example, clinical services would change. Instead of paediatrics, obstetrical, medical and gynaecological services, there would be burn, shock, trauma and radiation sickness services, especially if we were involved in an atomic disaster. The nurse would have increased numbers of auxiliary and volunteer workers to supervise and more training-on-the-job to do. To adjust to this new role will be a complex problem, not only for the nurse but for each member of the team because each will have to learn to accept new responsibilities when the need arises only to relinquish them when the danger is past. We can overcome the complexity of this problem by studying and practising the role of each member of the team, working under emergency conditions, now.

The first aid kits necessary for such training have been assembled and are being distributed. Two hundred and twenty-six first aid stations should be "in training" across Canada this winter. You will recall that in the event of disaster these stations will be established between  $1\frac{1}{2}$  and 2 miles from the ground zero, about  $\frac{1}{2}$  mile apart in ring fashion around the stricken area.

You will also recall that the First Aid Station was originally made up of 4 doctors, 3 dentists or pharmacists, 6 nurses and 60 auxiliary nurse personnel. No one from the First Aid Station would move forward from their station. Since our Health Services conferences last May, this concept has changed in that considerable responsibility for first aid at the site of injury has been vested in Health Services. The new complement of personnel for a First Aid Station now includes 108 stretcher bearers, twenty-four trained first aiders and two runners.

In closing may I repeat "teamwork may well be the key note to survival."

"Getting together is a beginning,

Keeping together is progress,

Working together is success."



## MEDICAL ABSTRACTS

**Acute Calcific Tendinitis and "Frozen Shoulder"—Their treatment with ACTH.**

*Quigley, T. B. and Renald, A.: New England J. Med., 246: 26, 1952.*

**C**ALCIFIC deposits in tendons of the rotator cuff of the shoulder are common. Most of these are innocuous, but in a few, a sterile inflammatory reaction results. The full-blown clinical picture is familiar; the slightest motion of the shoulder is acutely painful.

The sequelae (frozen shoulder syndrome) are due to contracted soft tissues, and could be prevented if free motion could be continued throughout the course of the disease.

ACTH was employed in 6 acute cases. Alleviation of pain and restoration of motion occurred in 3 acute cases within one or two days. In 3 others relief of pain required days rather than hours and restoration of motion was more gradual. In no case did inflammation recur after withdrawal of ACTH.

Two cases of "frozen shoulder" were treated with ACTH alone. Pain was temporarily alleviated but range of motion was not increased. In six cases ACTH was administered following manipulation under anesthesia and in all the range of motion achieved was maintained.

John W. MacIntosh.

**Diagnosis of Lesions of the Spinal Cord in Association with Osteoarthritic Disease of the Cervical Spine.**

*Spillane and Lloyd, United Cardiff Hospitals. Brain: 75: Part II, 175, 1952.*

Emphasizing that the recognition of the importance of disease of the cervical spine in the aetiology of lesions of the spinal cord is a recent development, these authors have presented observations on 21 cases in an age range from 43 to 72.

The common complaint was of low back "rheumatism" or pain, with stiffness or unsteadiness of lower limbs and "difficulty in getting about." All patients had complaints such as a leaden feeling in legs, cramps in calves and/or thighs, legs not clearing the ground properly, trembling of legs at night or after exertion, pain in lumbar region, buttocks or thighs, pain in upper limbs with no clear radiation, chest pain or electric shock-like sensations down the spine on neck flexion. Stiffness of the neck was only complained of in a few cases and after direct questioning.

Physically, the neck was apparently normal in most cases and the findings were those of root and long tract disturbance with definite signs of upper motor neuron lesions in the legs with hyperactive reflexes, clonus, dorsiflexion, etc. Hyperactive radial reflexes with strong reflex finger flexion was common and loss of vibration in legs.

X-rays: Plain X-rays showed arthritis of neurocentral apophyseal joints.

Myelograms were conclusive with almost complete obstruction of pantopaque opposite the cervical discs.

The condition was easily differentiated from P.M.A. by age and lack of cranial pathology, from multiple sclerosis by age, and from tumor by normal C.S. fluid and myelography.

Arthur H. Shears.



**In Place of Fear.** By *Aneurin Bevan* (Pgs. 201). London. *W. Heinemann Ltd.* 1952.

The chapter, "A Free Health Service," deals with the inauguration of the British National Health programme and the basic principles involved in its operation. The author maintains that he conceded virtually nothing to the B. M. A. in their opposition to the plan. He states, "the general public has no great faith in the medical profession considered as a collectivity, which in no way interferes with a warm attachment between individual doctors and patients." And ". . . in a conflict between the profession and the general public the latter will always win if they are courageously led." Group insurance is dismissed as being clumsy, expensive and unscientific. Contract practice is considered as too limited in its scope. The abuses attendant on the national scheme are not minimized, nor the expense (eight pounds per head of population).

Socialistic doctrine is attractively presented, and particularly directed for American consumption. There is no apologia for the British scheme, which he believes is here to stay, and may well serve as a blueprint for other countries. This is a provocative book, persuasively written.

G. A. Black.

### **The Development of Efocaine, a New Approach to Prolonged Local Anaesthesia.**

*F. P. Ansbro, M. D., A. H. Lasore, M. D., H. E. Shaftell, M. D., H. Halpern, Ph.D., F. A. Latteri, M. D., and B. Bodell, M. D., Anaesthesiology, 13: 3, 306, 1952.*

A single administration of this drug gives local anaesthesia of approximately two weeks duration.

The experimental studies leading to its development are discussed. Procaine and butyl amino benzoate are the anaesthetic agents. Propylene glycol is the solvent; it is slowly absorbed and has a high miscibility, thus forming an *in vivo* drug repository. Polyethylene glycol is used as a protective polymer, preventing decomposition of the agents.

A review of histopathological effects on various tissues is presented, it being evident that efocaine does not provoke a foreign body reaction and does not remain in a demonstrable form in the tissues.

The authors report the use of efocaine in 79 patients, utilizing the following procedures:—local infiltration, peri incisional infiltration, intercostal nerve block and ano-rectal infiltration.

The clinical results obtained were very gratifying and no local or systemic toxic reactions were noted.

A. S. Wenning.



## Correspondence

Dr. Margaret E. B. Gosse,  
Editor-in-Chief,  
The Nova Scotia Medical Bulletin,  
Dalhousie Public Health Clinic,  
Morris Street,  
Halifax, N. S.

Dear Dr. Gosse:—

In the September issue of "The Canadian Hospital" there appeared a short editorial "Newer Drugs in the Treatment of Tuberculosis" contributed by Dr. G. J. Wherrett, who is the Executive Secretary of the Canadian Tuberculosis Association, Ottawa. This editorial is very well expressed and is very timely, especially as it stresses the need for care in the use of the new drugs, particularly isonicotinic acid hydrazide. There is a growing tendency which is to be deplored, for patients and even some physicians to demand and administer these drugs indiscriminately without thought of the possible dangers.

At a recent meeting of the Management Committee of the Canadian Tuberculosis Association, it was suggested by the members present that Provincial Medical Bulletins might well be requested to reprint this editorial. I am now submitting this to you for the consideration of your Editorial Board and endorse its contents heartily.

Many thanks for your consideration of this request, and with kindest personal regards.

Sincerely yours,

J. E. HILTZ, M.D., D.P.H.  
Medical Superintendent.

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### NEWER DRUGS IN THE TREATMENT OF TUBERCULOSIS

FIVE years have now elapsed since streptomycin has come into use in the treatment of tuberculosis. This has allowed sufficient time to find out the answers to many questions concerning its use. Indeed, we might almost say that the standard treatment for tuberculosis, in relation to streptomycin, has been defined.

At no time since it was first used has there been any question but that it is a useful drug and will benefit many patients. Studies by many independent observers, and particularly studies by the Veterans' Administration of the United States and the Medical Research Council of Great Britain, have shed a great deal of light on the subject. Optimum dosage has become more or less standard. The use of para-aminosalicylic acid in combination has been shown to delay, and in many instances overcome, the onset of resistance to streptomycin, which was the greatest drawback to its use. This has permitted the long-term use of the drug, which appears to have decided advantage over shorter treatment regimens. This has also widened considerably the "op-



timum time" in the course of the patient's disease when the drug can be used. More and more we are reaching the conclusion that streptomycin, carefully used, is a good drug and one which has changed the outlook on the uncertain clinical course of tuberculosis.

The advent of the isonicotinic acid hydrazide and its derivatives, now referred to as "isoniazid," has raised similar hopes for its use as another potent weapon against the tubercle bacillus. Are such hopes justified for the place of this recent drug? While there are many reasons for such a belief, it is likely that considerable time will elapse before we know the answers.

We do know that is an easily synthesized chemical, which will cost little, is not patentable and is readily available. It has been found to be effective against tubercle bacilli in the test tube and in tuberculosis infections in experimental animals, but relapses occur and virulent tubercle bacilli have been grown from small residual pulmonary lesions removed at autopsy in experimental animals which had recovered following treatment.

The drug behaves well pharmacologically in man. It can be administered by mouth and, in suitable dosage concentrations, appears in the plasma and cerebro-spinal fluid in a strength effective against virulent tubercle bacilli in the test tube. Clinical and radiological improvement has taken place in many patients.

The disturbing feature is that resistance develops fairly quickly and its use may be much more limited than streptomycin with P.A.S. Whether such resistance can be delayed by combination with other drugs remains to be seen. From the present state of our knowledge, we cannot say that it is superior or even as good as streptomycin and P.A.S. At the present time we must say that more care and judgment is required in its administration to a particular patient and even closer observation of the patient will be required than when using streptomycin.

It has also become clear that it is not a short cut to the control of tuberculosis. It is not a preventive, but may be a better method of treatment. There can be no let up in case-finding procedures. There will be no reduction in the need for hospital beds. There may even be the reverse; although early cases may have a shorter stay in hospitals, other patients who would have died may recover after longer treatment.

It is thus evident that, while the advent of "isoniazid" is an important advance in the therapy of tuberculosis, further research is necessary to appraise its value and care must be taken as to the choice of patients for whom it should be prescribed. It cannot be too strongly emphasized that neither streptomycin nor isoniazid replace the well-tried methods of treatment by bed rest in the sanatorium and surgery in selected cases.

G. J. Wherrett, M. D.



## Personal Interest Notes

AT the annual convocation of the American College of Surgeons held in New York in September Doctor Fred J. Barton of Dartmouth received his F.A.C.S. Degree, the only Nova Scotian receiving such a Degree this year.

Doctor J. E. Hiltz, Medical Superintendent of the Nova Scotia Sanatorium at Kentville, returned in October from a three months tour of Europe where he visited medical institutions. While in Great Britain he visited the headquarters of the St. John Ambulance in London.

Doctor C. B. Stewart, Professor of Epidemiology at Dalhousie University, Halifax, was granted a Fellowship in the American Public Health Association at its annual meeting in Cleveland in October.

Doctor E. L. Eagles, Divisional Supervisor of the Nova Scotia Department of Health at Yarmouth, has been honoured with two distinctions. One is the Royal College of Physicians and Surgeons of Canada a certificate in Public Health, and the other a Fellowship in the American Public Health Association.

Doctor Gordon W. Bethune has opened an office for the practice of surgery at 324 Spring Garden Road in Halifax, and Doctor L. T. Stead has opened an office at 15 Quinpool Road in Halifax for the practice of medicine.

Doctor C. M. Jones of Halifax was elected President of the Nova Scotia Association of Radiologists at the annual meeting held October 23rd in Halifax. Other officers elected were Doctor W. H. Eagar, Wolfville, Honorary President, Doctor A. E. Blackett, New Glasgow, Vice-President and Doctor W. M. Roy, Halifax, Secretary-Treasurer. Doctor H. R. Corbett of Sydney, the retiring President, was chairman of the sessions.

The Bulletin extends congratulations to Doctor and Mrs. H. R. Phillips (Caroline Canty) of Halifax on the birth of twin daughters, Sharon and Karen, on August 18th; to Doctor and Mrs. D. B. Keddy (Leslie Ann Hayes) of Mahone Bay on the birth of a daughter, Martha Jane, on October 7th; to Doctor and Mrs. I. M. Murray (Betty C. Baird) of New York on the birth of a son, William Frederick, on October 30th; to Doctor and Mrs. D. S. Brennan of Bear River on the birth of a son, Neil Scott, on November 8th; to Doctor and Mrs. R. T. Annand (Elizabeth Johnson) of Bridgetown on the birth of a daughter, Joan Margaret on November 13th; to Doctor and Mrs. S. L. Speller of Halifax on the birth of a son, Stuart Donald, on November 18th, and to Doctor and Mrs. T. H. Earle of Upper Stewiacke on the birth of a son April 25.

Dalhousie University recently honoured two members of the Faculty by appointing them Professors Emeriti, on their retirement from active teaching. Doctor H. W. Schwartz, Professor of diseases of the eye, ear, nose and throat and head of the department and Doctor W. W. Woodbury, former Professor of Orthodontics and Dean of the Faculty of Dentistry.

The marriage took place at Shelburne on November 20th of Alice Freda, daughter of Mr. and Mrs. George Elliott Dawson of Westville and Doctor Donald Stirling Robb, son of the late Rev. Dr. and Mrs. A. F. Robb, Korea. The bride's only attendant was Mrs. Donald Muir, and Donald M. Muir acted as best man. Following their honeymoon Doctor and Mrs. Robb will reside in Shelburne, where Doctor Robb is medical superintendent of Roseway Hospital.



## Obituary

THE death occurred at Yarmouth on November 9th of Doctor William Cecil Harris following a stroke ten days previously. Doctor Harris was born at Sheffield Mills, Kings County on May 24, 1875, son of the late W. L. Harris and Tabitha Weaver. He graduated from Dalhousie Medical School in 1902 and first practised in Canning, and then moved to Freeport, Digby County. In 1909 he went to Barton, Digby County, and remained there until 1914 when he moved to Berwick and in 1917 went to Yarmouth and remained there until 1927. From 1927 to 1945 he practised in Barton, and returned to Yarmouth after his retirement from the medical profession.

During his active years he was prominent in fraternal and other community organizations. He was a Past Master of the Freeport Masonic Lodge, and on their behalf he was presented with a 50-Year Jewel in a special ceremony in Hiram Lodge at Yarmouth last summer. He was an Honorary Member of the Yarmouth Rotary Club, and an active curler.

Surviving are his wife, the former Anna M. Perry, and two sons, Karl B.B. Harris and Lt.-Colonel Herman L. Harris.

Funeral services were held at Yarmouth.

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Doctor John Harold Leslie Simpson passed away at his residence in Springhill on November 13th following a lengthy illness. Doctor Simpson was born at Springhill on May 20, 1897, son of John R. Simpson, and the late Mrs. Simpson. Doctor Simpson had one year of Science at Mt. Allison, cut short due to war. He went overseas in 1916 with the Sixth Siege Battery and served with the army of occupation in Germany for a time and returned in 1918 to resume his studies. He was awarded the Military Medal and Bar.

Doctor Simpson graduated from McGill University in 1924 and practised in his home town Springhill for twenty-eight years, and was a very popular citizen beloved by all. He was President of The Medical Society of Nova Scotia for the year 1938-39, and a member of Laurie Lodge A.F. and A.M.

Doctor Simpson is survived by his widow, the former Mildred Elizabeth Wilson of Saint John, N. B.; three daughters, Mrs. Murray Jones (Beatrice) of Port Credit, Ontario; Mrs. Malcolm McKeil (Jean) of Sackville, N. B., and Miss Marilyn at home; his mother, Mrs. John R. Simpson; two sisters, Mrs. Harry Arseneau (Ola) and Mrs. Ernest LeGrow (Juanita) all residing in Springhill; one brother, Douglas, of Cleveland, Ohio, and two half sisters, Mrs. Fred Gass and Mrs. Lester Piers of Calgary, and three grand-children.



# NOVA SCOTIA MEDICAL BULLETIN

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Abbreviations used:—Ab. for abstract; anon. for anonymous; biog. for biographical note; C. for correspondence; C.R. for case reports; diagr. for diagrams; Ed. for editorial; illus. for illustration; Pers. for personal item; port for portrait; rev. for review.

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## A DAY OF PREVENTIVE MEDICINE

Monday, January 12th, 1953.

The Dalhousie Post-Graduate Committee and the Department of Pre-ventive Medicine will this year conduct a "Day of Preventive Medicine" on January 12th at the Victoria General Auditorium. These one-day sessions are designed for full and part-time Public Health Officers as well as practising physicians. The success and attendance of last year's symposium attests to the need for continuing this day this year. In addition it allows town health officers to discuss their common problems.

As visiting lecturer we have been fortunate in obtaining Dr. Wallace Graham of Toronto who will conduct an arthritic clinic and also speak at an evening meeting at the Victoria General Auditorium on "The Arthritic Problem."

Among the subjects to be discussed will be:

- (1) Public Health Problems in General Hospitals.
- (2) Control of Common Infectious Diseases.
- (3) Recent Advances in the Control and Treatment of Tuberculosis.
- (4) Preventive Medicine in Obstetrics.
- (5) Mental Health Programme.

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