THE NOVA SCOTIA MEDICAL BULLETIN

Junior Colleagues

Practically all the practising profession in Nova Scotia – or anywhere else, for that matter – will recall their time of formal medical training – medical school, with or without additional postgraduate work – as a rigidly-planned, classical type of experience. It matters little whether one graduated in 1935 or 1965 – one's medical school programme was very much the same, in either case.

The emphasis in the university was on teaching, rather than learning, and little change had appeared in the curriculum, or the philosophy, since the Flexner Report of the early twenties. Students attended large, didactic classes in the medical sciences, basic and clinical, and were privileged to observe patients and their care. The student was examined on his ability to display his knowledge in an essay form, or by verbal answers. Generally he was not tested with regard to his skills, or those attitudinal characteristics which are requisite for the effective doctor. How could it be otherwise, for the student had very little personal contact with his teachers, especially as the classes grew larger.

The rigid curriculum (much of it irrelevant for practice), the nature of the examinations, and the impersonal, hierarchal, teacher-student relationship, led all to often to a rigidity of thought and feeling about medicine which resulted in significant *underachievement* in practice. The Clute report[1], and additional data gathered by continuing education bodies, morbidity and mortality studies, accreditation surveys, etc., attest to this fact.

All across the nation, there is a ferment of change. In the forefront of this has been the Dalhousie Medical School.

The most important changes are:

(1) The recognition that learning is what the medical school is all about, and that learning is not necessarily closely related to teaching (although ideally this will occur).

(2) The recognition that not all of us need to learn the same things, nor do we all learn the same way.

(3) The recognition that it is important to identify and justify those intellectual tasks which most students will need to accomplish to become doctors – any kind of doctors.

(4) The "discovery" that students have a role to play in the organization and selection processes for the curriculum, in the administration of the medical school, and in the evaluation of its activities.

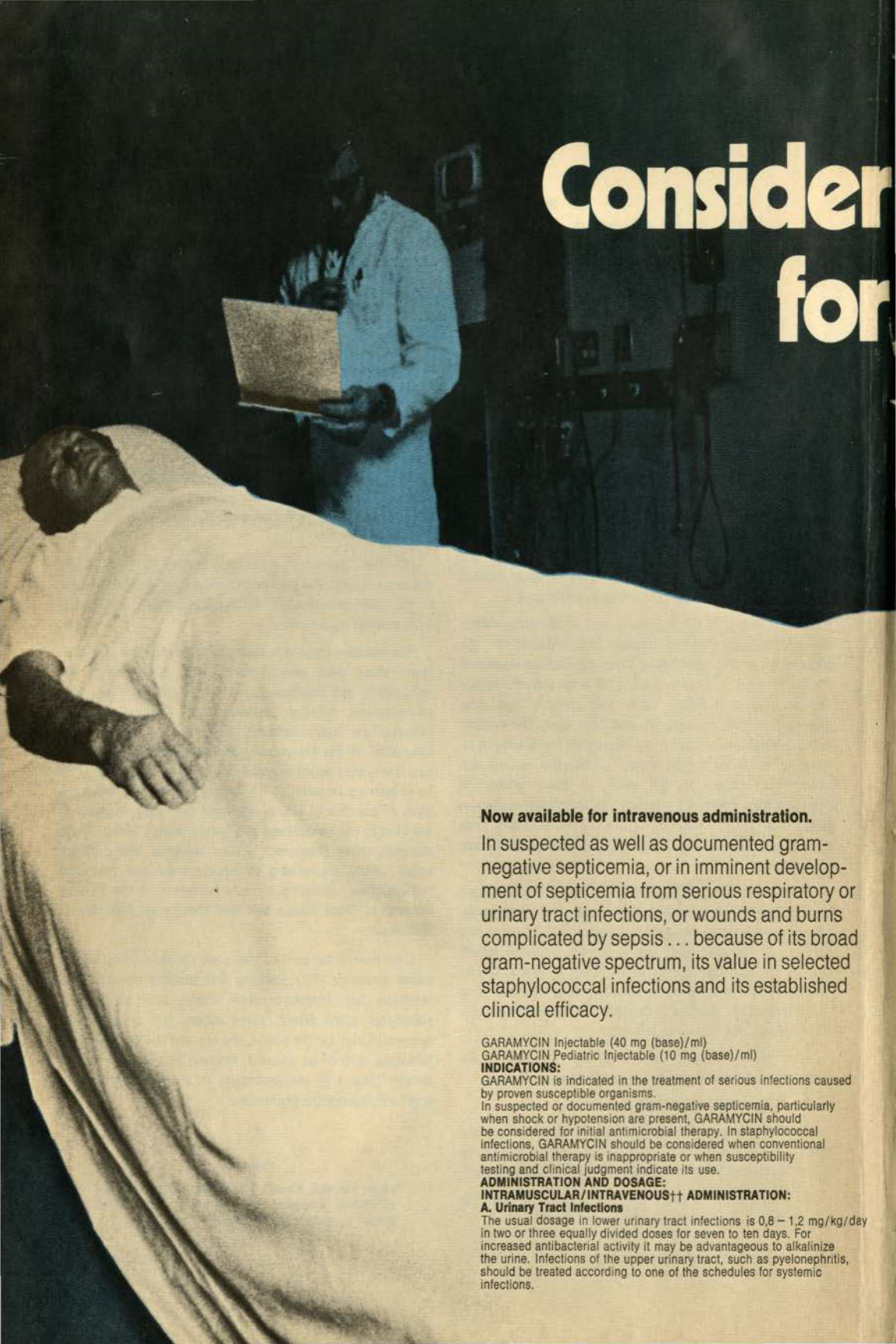
The modern student is clearly a different type of person from those who went before. Sure, he still fits the personality and intellectual profiles which have for years characterized medical students and doctors, but his interests are more catholic. Even as a student, he is interested in the community and the provision of health care; he is very much concerned with the relevance of what he is learning in terms of his future; with planning for the kind of practice he will pursue, and also, very much, with the kind of life he will have as a family person. Not only are students today concerned – they are vocal and they are active. Many are willing to devote time and take real responsibility. Students are now members of the Medical Society of Nova Scotia and the Faculty of Medicine at Dalhousie.

Over ninety per cent of those who enter medical school today complete their learning and become doctors. The selection has therefore been made, and we are all colleagues, some junior, some senior, but all with real responsibilities for the public, the art, and the profession. It behooves each of us, student, teacher, and practitioner, to behave toward all our colleagues in a manner befitting a great and responsible profession.

S.C.R.

Reference

1. **Clute, Kenneth Fleury:** The General Practitioner; a study of Medical Education and Practice in Ontario and Nova Scotia. Toronto, Univ. of Toronto Press, 1963.



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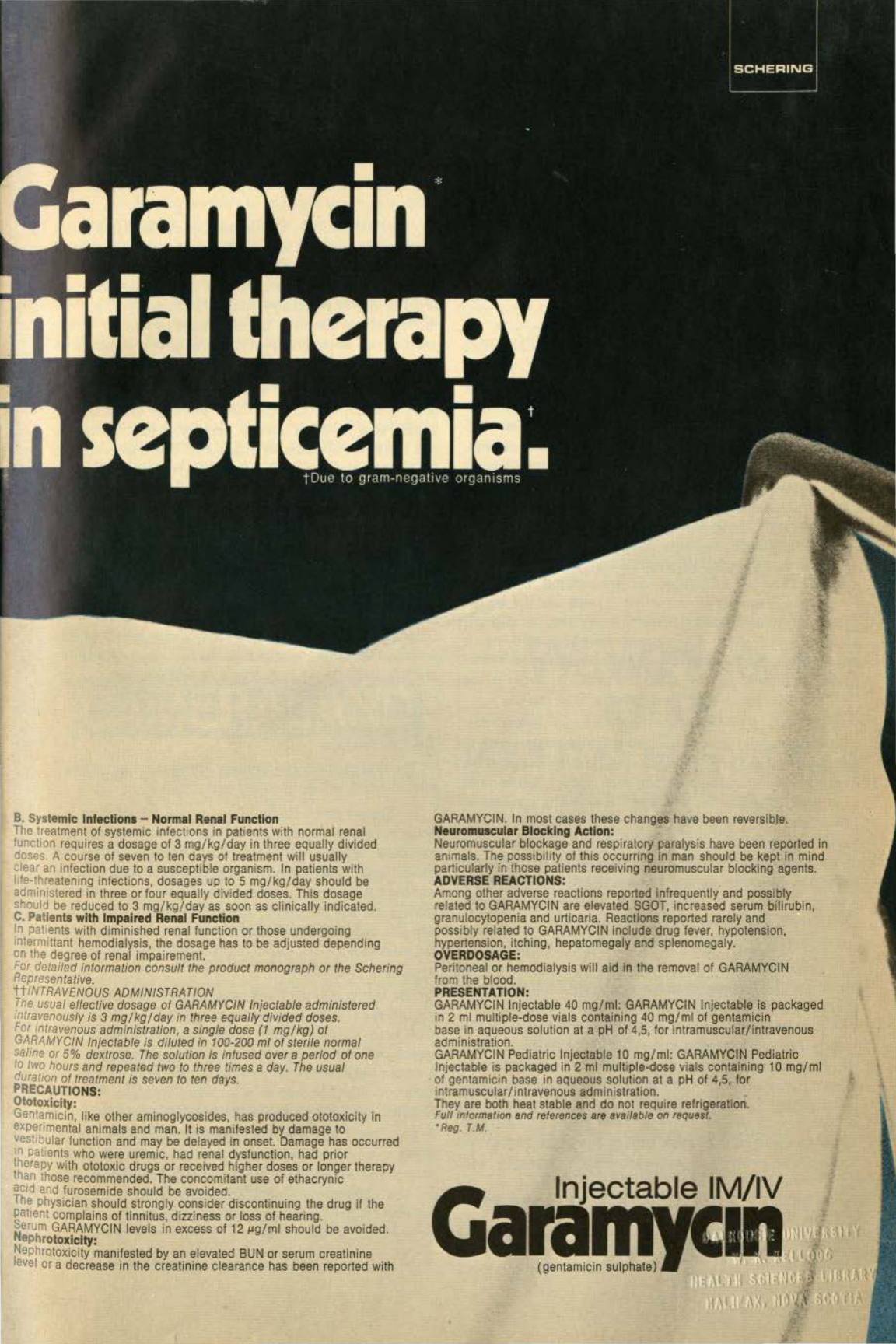

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The New Program: On Looking Back

Murray S. McQuigge, B.Sc.*

Halifax, N.S.

The question is often asked; "Are they still teaching that same old stuff to medical students?". The answer is no longer simple and perhaps the following will help clarify the changes in medical education since 1968 when Dalhousie Medical School instituted its new program of teaching medical students.

The Current Curriculum

The following is a synopsis of the current curriculum in each medical school year:

FIRST YEAR Four major body systems are studied; the respiratory system, cardiovascular system, gastrointestinal system, and the renal – metabolic system. The Departments involved in these blocks are mainly: Anatomy, Physiology, Radiology, and Medicine. Biochemistry is presented as a separate subject. Other first year subjects are: Biostatistics; cellular pathology; human behavior; growth and development; introductory microbiology with immunology; and very brief introductory course on the blood, the endocrine system, and traumatic surgery. An Elective is introduced in the second and third trimesters. Learning examinations – tests on the blocks that the student marks himself – are held throughout the year to show the student how his studying is progressing (or regressing!). A comprehensive examination, embracing all the block material, is given at the end of the year to give the student a final mark.

SECOND YEAR Here the integrated blocks are: neurological and special senses; musculoskeletal system; respiratory system; cardiovascular system; endocrine system; renal-metabolic system; reproductive system; and the gastrointestinal system. The Departments involved in these blocks are; anatomy, physiology, pathology, pharmacology, medicine, surgery, preventive medicine, obstetrics, and gynaecology. Some shorter blocks included are: the endocrine system, integumentary system, blood system, preventive medicine, pharmacology, and immunology. Each student carries an elective.

THIRD YEAR The year is introduced by three weeks of radiology, laboratory procedures and anaesthesia. This provides a basic grounding for the blocks to follow since these subjects recur in the blocks throughout the year. The time devoted to the system blocks becomes smaller, as the student has an increasing amount of direct patient contact. Approximately half the student's time is occupied with direct patient-related learning situations in the hospitals. The subject blocks previously studied occur again in the Third Year in a much shortened form. Some time in Third Year set apart for the departments of psychiatry, preventive medicine, anaesthesia, ophthalmology, radiology, and otolaryngology. Again, an elective is carried throughout the year.

FOURTH YEAR This is the Clinical Clerkship and it extends for a whole year, with one month for vacation. This year is divided into two months of medicine, two of surgery, two of paediatrics, two of reproduction, and urology, one of psychiatry, one of family practice, and one month of an elective. Of the month spent in family practice,two weeks are spent with two general practitioners and two weeks are spent in the Family Practice Centre.

The Clinical Clerkship year has been greatly changed. On each rotation, the Clinical Clerk plays an active part in patient care by being directly responsible for the work-up and treatment of a number of patients. This is accompanied by teaching sessions on the wards and in the lecture room by the staff men on that service.

This is a critical year in a student's education. It is only when one has this responsibility to patients that one's teaching become really relevant and one eagerly seeks information on how to handle his patients.

INTERNSHIP At present the Internship year must take place in the Maritimes and under the supervision of the Dalhousie Medical School. The student may take a general rotating internship; he may take the first year of his family practice specialty, he may take a straight internship as the first of his specialty training, or he may combine his internship with a training programme towards a Ph.D.

The New Program

The new program has basically introduced four changes, each of which will be discussed separately.

i. System Block Design: This involves the teaching of a body system in its entirety so that the student sees that particular system from every possible basic science and clinical view. This has forced departments to work together and has cut out much redundancy and overlap. It allows the student to put everything together whereas, formerly, it was not until third and fourth years that the student saw the relevance of the basic sciences and their connection with the clinical sciences.

The teaching time of anatomy has been reduced. Under the old system, the first year consisted mainly of anatomy (600 hours). This is now taught with the blocks and is spread over the first two years (total – 362 hours). It has been our experience that anatomy is not really learned and retained until it is learned in a clinical situation. Thus we find that this basic grounding in anatomy is adequate.

ii. Free Time: The time table in the first three years leaves unscheduled hours during the week in which the student may do whatever he choses. This free time was put in the program to stimulate the student to be a "self-learner". This has, in surveying the class, by and large,

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succeeded. Most of the class endeavours to keep up with at least a few of the current journals and, among those contemplating general practice, there is an understanding that they will set aside time to return for refresher courses, after graduation.

iii. Clinical Experience: In the first year one halfday per week is spent in the hospitals with patients, in the second year one day per week, and by third year, half of the teaching time is spent with patients. As well, the first year student is assigned a new-born baby to follow for the year, and the third year student, as part of a team of medical, nursing and social worker students, and medical adviser, looks after a family for the year.

It is agreed among the class that this introduction of early clinical experience has been the most worthwhile change in the new program. It is not mere coincidence that there were many dropouts in the first year preceeding the new program and only one after the new program was instituted. Seeing patients as soon as one starts medical school enabled us to see the relevance of the basic science teaching and also to feel at ease talking to and examining patients.

iv. Electives: The student carries an elective through the first four years of medicine. In the first three years the student works at his elective in some of the free time alloted. In fourth year a month is set aside for this elective. This has enabled the student to pursue any field of medicine in which he is particularly interested. As the years have progressed, the quality of the electives chosen has risen accordingly. They have contributed greatly to making the student into a self-learner. It is hoped that in the future more time in the first four years will be devoted to electives.

Comment: The new program has produced a more flexible student, more willing to accept and more eager to change that which seems stagnant or out of step with the times. The fourth year students have acted as "guinea pigs" for this new program and have become old hands at carrying on evaluations continually as they pass through the program. They have seen how they can alter their own education and have become more critical of the way that they are being taught. This has caused the Faculty some considerable consternation as they see their students wanting to change their education even faster than it is being changed now.

The new program is not perfect nor did anyone expect it to be. But one thing is sure: it is an improvement. In talking to members of the Faculty, it is clear that the new program was not desinged to remain static but rather, it is the base upon which changes will be made as medicine continues to evolve. □

Phenylketonuria: A Library Study†

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Introducing this subject in a standard medical text, Smith defines phenylketonuria as "a metabolic disorder secondary to an inherited deficiency of phenylalanine hydroxylase. This results in the accumulation of phenylalanine and some of its metabolites (notably phenylpyruvate, phenyllactate, phenylacetate and *O*-hydroxyphenylacetate) and a syndrome of mental deficiency. Other neurologic deficits, and reduced pigmentation may also occur".

This inborn error of metabolism, now termed phenylketonuria, was first described in 1934 by Følling, who found ten mentally defective patients all excreting phenylpyruvic acid in their urine. Jervis later proved that there was a genetic basis for this disorder; he believed that it resulted from a single autosomal recessive gene. He found that this led to a deficiency for the enzyme, phenylalanine hydroxylase, an enzyme necessary for the proper metabolic balance between phenylalanine and tyrosine.

Occurrence of Phenylketonuria

Phenylketonuria is found in about 0.64% of institutionalized defective persons throughout the world. In most random samples taken in North America, it occurs once in approximately 15,000 persons. In Nova Scotia where there are about 13,000 births annually, one or two defective infants are discovered each year through screening tests, which are carried out on approximately 86.6% of all newborns. Screening is even more extensive in the other Maritime Provinces, 93% to 100% of all newborns being tested for this metabolic disorder.

The principles of medical statistics and epidemiology have been found useful in the study of phenylketonuria. In various samples, phenylketonuric patients show a sex distribution of 51% females and 49% males, so that this condition is obviously not an X-linked characteristic. As for its age distribution, a 1966 study showed peaks under five years and over 35 years of age. The first peak apparently reflects tardy diagnosis, which is improving during the last few years. The scarcity of patients over 35 may be the result of high death rates common to all severely mentally deficient persons, for it has been calculated that 50% of phenylketonurics die by age 20 and 75% by age 30.

Biochemistry

In normal metabolism, much of the phenylalanine is altered by hydroxylation to form tyrosine, which is a necessary substrate for hormone and melanin production. However with a deficiency of phenylalanine hydroxylase, these metabolic changes cannot occur, so that phenylalanine accumulates. As quantities increase, alternate metabolic pathways come into operation, resulting in some diminution of levels, with phenylpyruvic acid and phenyllactic acid appearing in the urine.

Tyrosine, which is not normally considered to be an "essential amino acid", now becomes a necessary part of the diet. However, this metabolite is unable to alleviate the secondary effects of phenylketonuria, because the accumulation of phenylalanine interferes with the optimal function of the enzyme tyrosinase. The result is that melanin production remains greatly reduced, accounting for blond hair and blue eyes in about 60% of phenylketonuric patients. Other results are decreased amounts of epinephrine, norepinephrine and thyroxine, since all of these hormones are partly derived from tyrosine. These metabolic pathways are shown schematically in the diagram on the page opposite:

Clinical Findings and Diagnosis

The chief manifestation of untreated phenylketonuria is mental retardation, most patients having a Binet Intelligence Test score of less than 20, while the remainder score less than 60 and only 2% scoring above 60. Clinically, a diagnosis of phenylketonuria is made in those persons with phenylalanine plasma levels greater than 20 mg.%, with values for normal persons clustering tightly about 2 mg.%. (See Figure 1).

More strict criteria for the diagnosis of phenylketonuria include:

1) serum phenylalanine levels $>$ 15 mg.%

2) urine phenylalanine levels $>$ 100 μg./ml.

3) urine *O*-hydroxyphenylacetic acid levels $>$ 10 μg./ml.

4) serum tyrosine levels $<$ 1 mg.%

Excessive phenylalanine levels result in the mental signs and symptoms through three mechanisms:

1) through competitive inhibition, the uptake of other essential amino acids by the central nervous system is decreased.

2) phenylethylamine (an amphetamine-like substance formed by one of the alternate metabolic pathways of phenylalanine conversion) increases in the central nervous system.

3) the decrease in noradrenaline production indirectly causes sedation.

† Essay prepared in completion of a first-year elective under the preceptorship of Dr. A.C. Irwin, Associate Professor, Department of Preventive Medicine, Dalhousie University, Halifax, Nova Scotia.

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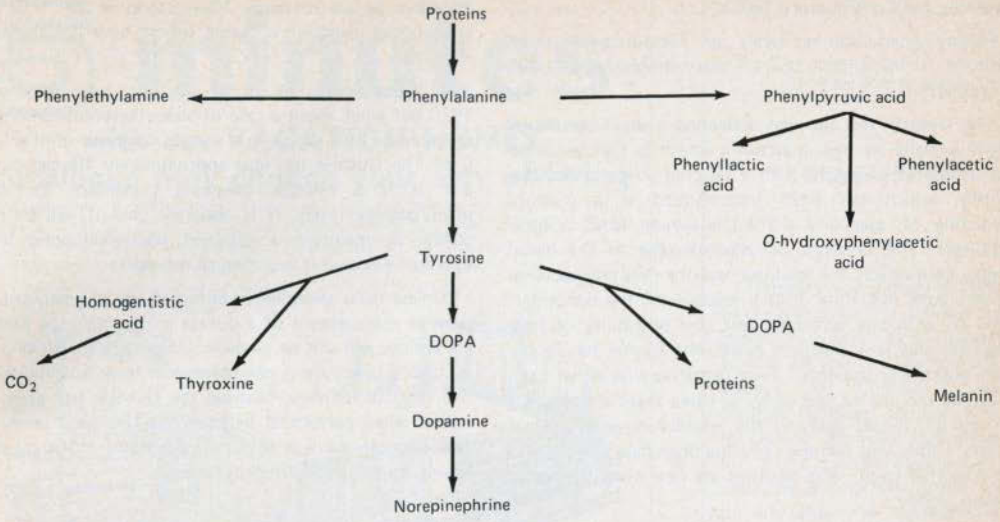

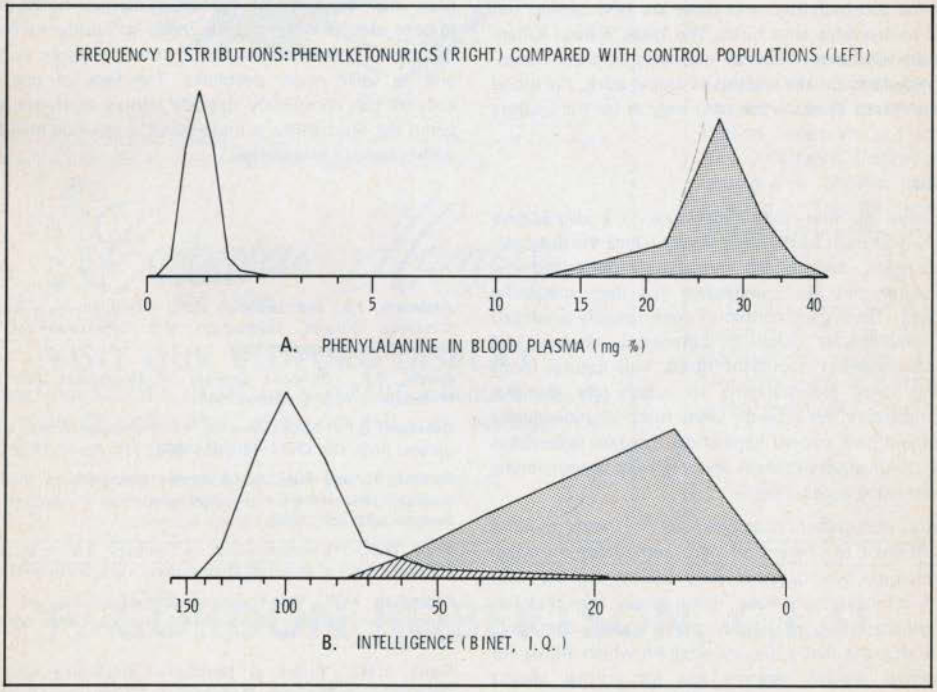

FIGURE 1

Two parameters of phenylketonuria:

A. Plasma levels of phenylalanine

B. Binet Intelligence Test scores

Screening and Confirmatory Tests

Plasma phenylalanine levels are measured by three methods: (i) the Guthrie test; (ii) chromatography; and (iii) fluorometry.

The *Guthrie test* involves collecting a small sample of blood (usually by heel puncture), which is then air-dried and incubated overnight with a selected strain of *Bacillus subtilis*, which has been incorporated in a medium consisting of agar and β-2-thienylalanine (a *B. subtilis* inhibitor). The presence of phenylalanine in the blood sample counteracts the inhibitor and the resulting bacterial growth zone indirectly gives a measure of the concentration. As with any screening test, the possibility of false negatives and false positives exists, the former having the more serious consequences. False negatives arise either from screening the patient too early, or when there are neonatal nursing difficulties delaying the establishment of normal dietary habits and thereby reducing phenylalanine uptake. On the other hand, false positives are rare when the test is done correctly.

Positive Guthrie tests are confirmed by chromatographic studies on blood and urine to evaluate the extent of phenylanine accumulation, and these are best carried out from six to ten days after birth. The Izaak Walton Killam Hospital for Children in Halifax currently employs fluorometric procedures for the analysis of amino acids, the blood samples prepared in much the same way as for the Guthrie test.

Treatment

It is obvious that phenylketonuria is a degradative disorder which must be managed wisely. Once the diagnosis has been made, patients are immediately prescribed low phenylalanine diets to compensate for their metabolic inefficiency. These diets consist of commercially-produced protein supplements (such as Lofenalac), vitamin and mineral supplements, sufficient fluids, and natural foods containing some phenylalanine to supply the minimal amount necessary for growth. Diets must be individually regulated and each patient kept under constant supervision to allow optimal development and yet keep phenylalanine levels from rising above 3 mg.%.

Initially, elimination phenylalanine diets were thought to be sufficient to prevent all signs and symptoms when phenylketonuria was detected early (during the first two weeks of infancy), but many investigators fear that too rigid restriction of phenylalanine can be equally damaging. It is now thought that a dietary program which allows for both normal growth patterns and for normal plasma phenylalanine levels, cannot harm the patient.

Compulsory Screening

At the present time, the feasibility of compulsory screening for phenylketonuria and other neonatal metabolic disorders is controversial. Many states in the U.S. have manadatory regulations, while others have not instituted this policy.

In Nova Scotia, 86.6% of newborns were screened in 1970 but what about a case of phenylketonuria among the remaining 11.4% which may escape diagnosis until it is too late? The Guthrie test cost approximately 10c per patient and it is a reliable screening procedure for raised phenylalanine levels. It is apparent that it will be more costly to maintain a retarded phenylketonuric in an institution than it is to screen all newborns.

Unless mass screening is enforced for all newborns, the prompt management of a disease entity requiring immediate action, will not be possible. One major problem is that of timing, since most newborns now leave hospital within five days of delivery, whereas the Guthrie test gives best results when performed between the sixth and tenth day. One possible solution might be the home follow-up of all infants by public health departments.

Conclusion

Metabolic disorders such as phenylketonuria are complex manifestations of human existence. Each of their minute details may require years of study in order to untangle interconnections with other metabolic pathways, and to solve major problems. The lack of one simple enzyme can completely degrade human existence and yet when the mechanism is understood, a solution may be well within today's knowledge. □

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INSTRUCTIONS

TO AUTHORS

Members and others wishing to contribute to *The Bulletin* are invited to submit their material to the Offices of The Medical Society, Sir Charles Tupper Medical Building, Halifax, N.S. In general the rules laid down for the *Canadian Medical Association Journal* and published therein under the heading "Instructions to Contributors", should be followed.

Material should preferably be typed on one side of paper 8½ x 11 inches, with wide margins. Carbon copies are not satisfactory. Any table, illustration etc. quoted from another published source must have the permission of both author and publisher.

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Gestational Trophoblastic Disease

(1965-1970 Victoria General Hospital, Halifax, Nova Scotia)

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Summary: *Our limited experience at the Victoria General Hospital with gestational trophoblastic disease has been presented. Of the 14 patients who had molar pregnancies, initially treated at our hospital, three of eleven adequately followed subsequently developed persistent non-metastatic gestational trophoblastic disease, an incidence of approximately 20%. With early detection and subsequent administration of chemotherapy, these patients are free of their disease some four years after treatment.*

Our one patient with invasive mole and one patient with metastatic choriocarcinoma likewise responded well to chemotherapy and continue in remission three to four years later.

This experience strengthens the known fact that follow-up of patients with molar pregnancy is imperative, and that referral to centres equipped to monitor HCG titres and prepared to undertake administration of chemotherapeutic agents, is mandatory if the current trend of decreasing morbidity and mortality from this disease is to be continued.[16]

Gestational trophoblastic disease is a term that has been applied to hydatidiform mole, invasive mole (chorioadenoma destruens) and choriocarcinoma (chorioepithelioma)[1] whose etiology is dependent upon an associated or antecedent pregnancy.

Hydatidiform mole is a pregnancy where the normal placental tissue has been transformed into hydropic villi with variable trophoblastic proliferation. It is an EARLY stage in the SPECTRUM of gestational trophoblastic disease. Approximately 15 percent of women with this disorder will develop persistent disease either existing as residual mole (invasive mole) or as choriocarcinoma with or without metastatic spread.[2]

Invasive mole is a hydatidiform mole which has invaded the myometrium. This causes a significantly greater morbidity from perforation, hemorrhage, sepsis and occasionally metastasis. The mortality of invasive mole when such complications occur approximates 15 percent.[3]

Gestational choriocarcinoma, an epithelial tumor composed of both syncytiotrophoblastic and cytotrophoblastic cells is probably the most uniformly and rapidly fatal malignancy of women in the child-bearing age. It may occur following any type of pregnancy, e.g. normal, abortion, ectopic or molar. The proliferating trophoblast invades myometrial tissue causing hemorrhagic necrosis with marked tissue destruction and because of this, a tendency for early metastasis is present.

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Incidence

The occurrence of gestational trophoblastic disease varies greatly with geographic and ethnic distributions. In the United States, Lewis[4] states that 1:2000 pregnancies develop hydatidiform mole whereas amongst Asians and Mexicans 1:200 pregnancies develop this.[5]

Gestational choriocarcinoma is preceded by hydatidiform mole in 46% of cases, by either abortion or normal pregnancy in 41% of cases and by invasive mole in the remaining 12-14% of the cases.[6] In Manila choriocarcinoma occurs in approximately 1 in 1,382 pregnancies, whereas in Chicago the incidence is 1 in 16,020 pregnancies.

Gestational trophoblastic disease is a spectrum of all the above, however as illustrated by recent work, all the stages may be present at one time in the same individual.[7]

Diagnosis

I HYDATIDIFORM MOLE

(a) HYDATIDIFORM MOLE SHOULD BE SUSPECTED WHEN –

1. Women with amenorrhea develop painless uterine bleeding.

2. The bleeding usually appears between the 2nd and 4th month of pregnancy.

3. The uterine size is larger than the duration of amenorrhea would suggest.

4. Absence of fetal movements or fetal heart sounds (in those uteri large enough to justify their presence).

5. Absence of a fetal skeleton (as in No. 4).

6. Early toxemia of pregnancy (less than 20 weeks), possibly with disturbing degree of hyperemesis.

7. Abnormal elevation of urinary HCG titres.

8. Sudden appearance of hyperthyroidism.

(b) CONFIRMATION OF PRESENCE OF HYDATIDIFORM MOLE PRIOR TO EXPULSION

1. Amniography

2. Arteriography All produce a characteristic pattern[8]

3. Ultra sound

4. Fetal EKG (to verify absence of the fetal heart tones)

(c) PROVEN DIAGNOSIS – PATHOLOGICALLY

1. Spontaneous passage of grape like vesicles.

2. Post evacuation – uterine curettings, which may show proliferating trophoblastic tissue of varying degree and/or evidence of myometrial invasion with or without tissue destruction.

II INVASIVE MOLE – CHORIOCARCINOMA

(a) Persistent HCG titre elevation beyond six weeks after termination of molar pregnancy.
(b) Rising HCG titres during post-molar evaculation period.
(c) Hydatidiform mole with metastatic lesion(s) in lungs on X-ray.
(d) Associated with the above may or may not be poor uterine involution and/or abnormal uterine bleeding.
(e) Patients with signs or symptoms indicative of central nervous system abnormality, intra-abdominal bleeding, pulmonary problems, or abnormal bleeding from the urogenital tract, having recently had ANY type of pregnancy, (e.g. normal, abortion, molar or ectopic) must have HCG determinations performed. Then one might suspect choriocarcinoma.

NOTE: Histological proof is usually NOT available to make this diagnosis because of inaccessibility of the lesions to the usual diagnostic tests.

THERAPY

Radical changes have occurred in the therapy of gestational trophoblastic disease during the past few years. This malignancy is one of the few which responds WELL to chemotherapeutic agents, and what was once a devastating disease now has promise to be controlled in a high percentage of cases. Surgery, once the prime mode of therapy, now has limited value and only in selected cases.

Recently Dr. Donald Goldstein stated: "with proper selection of agents, early diagnosis, aggressive therapy based on the hormonal chorionic gonadotropin regression slope and careful follow-up, one can VIRTUALLY ELIMINATE trophoblastic disease as a cause of death."[9]

MATERIALS

Sixteen patients with gestational trophoblastic disease were treated in the Department of Gynecology of the Victoria General Hospital, Halifax, Nova Scotia between January 1, 1965 and December 31, 1970.

Admitting Diagnosis

Hydatidiform mole	14 patients
Invasive mole	1 patient
Choriocarcinoma	1 patient

SIGNS AND SYMPTOMS OF PATIENTS WITH HYDATIDIFORM MOLE:

(a) Abnormal uterine bleeding was present in all patients of whom 7 had a Hb. of less than 11 grams % on admission.

(b) Excessive vomiting was present in	6 patients
(c) Toxemia	
1. Hypertension alone	1 patient
2. Hypertension with Edema & Proteinuria	1 patient
3. Eclampsia	1 patient

(associated bilateral theca-lutein cysts and uterine size greater than 24 weeks gestation)

(d) Length of amenorrhea	
15-20 weeks	11 patients
9-14 weeks	3 patients
(e) Pyrexia present in	3 patients
(f) Crampy abdominal pain noted in	11 patients
(g) Uterine size pre-evacuation	
Larger than dates	9 patients
Smaller than dates	4 patients
Unknown	1 patient
(h) Theca-lutein cysts of ovary suspected in	3 patients

The case of INVASIVE MOLE was referred following an abdominal hysterectomy for uterine fibroids – a 52 year old woman, who to her knowledge had never conceived. Following hysterectomy her HCG titres remained elevated.

Our ONE patient with CHORIOCARCINOMA was treated elsewhere for a molar pregnancy six months earlier; she has had adequate follow-up EXCEPT for the eight weeks preceding her admission to hospital. She presented with abnormal uterine bleeding, multiple pulmonary metastases on chest X-ray and elevated HCG titres. Uterine curettage revealed choriocarcinoma.

METHOD OF DIAGNOSIS

(a) 13 patients – spontaneously passed molar tissue.
(b) 1 patient – proven diagnosis with arteriography.
All of these 14 patients underwent a post-evacuation uterine curettage.
(c) Hysterectomy – pathology – invasive mole.
(d) Choriocarcinoma – referred with that diagnosis as noted.

THE MEDICAL SOCIETY OF NOVA SCOTIA

PROCEEDINGS OF

7th MEETING OF COUNCIL (1971)

AND

118th ANNUAL MEETING

The first session of the 7th Meeting of Council began as the Officers, attired in academic gowns, accompanied by Dr. H.D. Roberts, President of the Canadian Medical Association and Mr. B.E. Freamo, Executive Secretary, Canadian Medical Association, paraded through the medical exhibit lounge and council chambers to the head table. At this point Dr. P.B. Jardine, Chairman of Council, called the meeting to order. Proceedings commenced at 2:00 p.m., Thursday, November 25, 1971. Guests of the Society to whom Dr. Jardine extended a warm welcome included Honourable Gerald A. Regan, Premier of Nova Scotia, The Honourable D. Scott MacNutt, Minister of Public Health in Nova Scotia; Dr. H.D. Roberts, President, Canadian Medical Association; Dr. L.E. Lawton, President, Newfoundland Medical Society; Dr. E.B. Johnston, President, New Brunswick Medical Society; Dr. Kent Ellis, President, Prince Edward Island Medical Society; Mr. S.S. Jacobson, Chairman, Medical Care Insurance Commission; Mrs. Joan Fox, President, Nova Scotia Registered Nurses' Association; Dr. Earl Dexter, President, Nova Scotia Dental Association; the Honourable A. Garnet Brown, Minister of Public Highways; Mr. B.E. Freamo, Executive Secretary, Canadian Medical Association; Mr. A.B. Balcom, President, Nova Scotia Hospital Association; Mr. M. Balcom, Chairman of the Ambulance Advisory Board; Mr. L.M. Delbridge, Executive Director of the Nova Scotia Highway Safety Council; and Mr. C.E. Pass of the Driver Licensing Division of the Department of Public Highways.

Dr. Jardine welcomed the Exhibitors noting that the Society recognizes their contribution to the Society's Annual Convention. While complimenting the Exhibitors on the quality of their displays, he encouraged Council members to take every opportunity to discuss the products on display. Dr. Jardine noted that exhibit representatives would be attending the Friday Luncheom and Banquet as guests of the Medical Society.

Dr. Jardine addressed Council briefly on the order of business and presentation of reports.

Dr. C.J.W. Beckwith read the names of Society members deceased between October 31, 1970 and November 25, 1971 as follows: Dr. A.J.R. Brady, Dr. M.T. Danak, Dr. W.E. Hirtle, Dr. C.W. Holland, Dr. A.J. MacKendrick, Dr. C.N. Morehouse, Dr. A.M. Siddall, Dr. I.R. Sutherland, Dr. M.A. Thomas, Dr. G.B. Wiswell and Dr. R.G.A. Wood. Council observed a period of silence in tribute to the memory of these members.

New membership applications totalling seventy-two (72) were approved by Council.

The Transactions of the 6th Meeting of Council and the 117th Annual Meeting (1970) as printed in the February 1971 Issue of the Nova Scotia Medical Bulletin were approved.

THE EXECUTIVE COMMITTEE REPORT – Dr. P.B. Jardine's Report was a detailed review of action and decisions taken on behalf of the Society members during 1971.

The Executive Committee held five regular and two special meetings during the year, the latter being concerned with revisions to the 1967 Fee Schedule and the LeDain Commission Brief on Non-Medical Use of Drugs. The 1972 Summer Meeting at Keltic in September was approved with the Executive Committee Meeting being held on the mornings of September 8 and 9. This is a continuation of the successful program of holding one Executive Committee Meeting outside Halifax each year. The Executive Committee continues to be concerned with its level of efficiency and has struck an Ad Hoc Committee chaired by Dr. Mason to study, in particular, the subject of communications within the Society and report to the next Annual Meeting.

During the year the Executive authorized Society sponsorship of the Cape Breton Regional Health Planning Project. This Project is a study to assess and project health needs in the Cape Breton area, design an integrated delivery system to respond to these needs and to design a long-term implementation plan to develop the delivery system. This Project and its Report will be of some significance, particularly to the Council of Health which is presently studying the overall health problem in Nova Scotia. As well, the Executive sponsored Society involvement in the North-End Community Clinic. The Society's participation was in the nature of research and concept-testing as opposed to actual operation of the medical clinic. In excess of twenty-five doctors volunteered their services during the summer and many are continuing to participate. The Project has been eminently successful and clearly demonstrated that without the participation of Metro Dispensing which provided drugs at low or no cost as circumstances indicated, it would not have succeeded. The financial welfare of the Multi-Service complex was enhanced by the Society to the extent of about twenty-three thousand dollars ($23,000) at no cost to the Society. These funds were arranged through the Provincial Government and Opportunities for Youth Project as well as donations of MSI payments by physicians participating.

The Executive Committee made arrangements for medical students to participate in Society affairs on an interim arrangement basis pending further consideration of student membership in the Society. This arrangement has been of mutual benefit. The Society has also co-operated with the Faculty of Medicine in preparing a proposal to the Government concerning financial aid to medical students through a loan/contract arrangement.

The Executive Committee authorized Murray G. Bulger & Associates Limited to undertake a detailed review and redesign of the Society's Life, Disability and Office Overhead Insurance Plans. The results will be improved coverage for Society members at lower rates. Introduction of the new plans is expected to occur in early 1972. The Society Plans will be set up on "retention of earnings formula", thus allowing profits to accrue to the Plan participants and Society. Dr. R.A. Perry urged all members to participate in these plans as increased participation would tend to reduce premiums.

Council approved the decisions and actions taken on behalf of the Society members during the year by the Executive Committee.

PRESIDENTS' LIAISON COMMITTEE REPORT – Dr. J.F.L. Woodbury reported that the primary responsibility of this Committee is the conduct of business, discussions and negotiations with Government and outside agencies on behalf of, and under the direction of the Officers and Executive Committee. To this end the Committee has maintained a continuing dialogue with Government, Commissions and Departments on a variety of subjects.

In summary, Dr. Woodbury reported that meetings were held with the Minister of Public Health to discuss the formation of the Health Council, its composition, functioning and appointments thereto, financial aid to medical students, extension of M.S.I. benefits, in particular in the area of family planning and sterilization, the formation of the North-End Multi-Service Complex referred to earlier in the Executive Committee Report, remuneration of physicians, and financing of hospital capital and operating expenses.

During this year the Committee met with the Hospital Insurance Commission on a number of occasions to discuss subjects such as remuneration of radiologists and pathologists, communication systems in hospitals, Nova Scotia ambulance services. Society representatives also participated in the review of the Commission's Beds and Facilities Report.

The matter of revision to the 1967 Fee Schedule and its adoption as the basis for the M.S.I. tariff occupied a great deal of this Committee's time. The details of the year's activities up to the point of the Annual Meeting appear in President's Newsletters 8 and 9 which form part of the record of this meeting.

With respect to appointment of a Medical Society Representative to the Health Council Dr. Woodbury reported that the Medical Society has submitted to the Minister of Health at his request a list of six members for consideration by him for appointment to the Council. From this list, which included three general practitioners Dr. Woodbury was selected. A supplementary list of six was provided in the event that none in the basic list were satisfactory to the Minister.

Dr. Woodbury informed the meeting that the Medical Society could rightfully take part of the credit for the broadening of M.S.I. benefits to include family planning counselling and sterilization.

The recommendation of this Committee that the Fees Committee be dissolved and that the Officers of the Medical Society be responsible for the Schedule of Fees on the basis of two important provisos: (a) final approval for all actions of the Officers in relation to the Schedule of Fees will be in the hands of the Executive Committee; and, (b) that the Officers, functioning in their role as an Economic and Fees Committee, will be augmented by the addition of one member from each of the Specialty Sections was approved. In addition, it was approved that the staff of the Medical Society be enlarged by the addition of a mature individual with experience in statistical analysis and application of computer technology who would be responsible for management of the Society Fee Schedule in accordance with Society policy and who would be also expected to conduct, under direction, allied research required by the Society.

C.M.A. COUNCIL ON ECONOMICS – Dr. G.C. Pace's Report detailed the nature of studies being conducted within his Council, some examples being, fees for services rendered in teaching hospitals, nomenclature studies sponsored by the Federal Government, methods of payment by D.V.A., income disparities, high income physicians, medical review and cost quality control. Dr. Pace set out a number of principles which he suggested should be adopted by the Society as guidelines in its economic activities for the future. These are: (a) since there is value to society in having equally well-trained and hard-working doctors in different branches of medical practice, therefore, the average net life-time earnings, after taxes, of doctors in general practice and various specialties should also be similar; however, because of different lengths of average working life annual incomes may differ significantly. Fee Schedules should be designed to produce equitable similarities in life time earnings but recognizing the fact that there will always be wide variations of income between the very busy and the less busy physician in any particular specialty; (b) there is a continuing requirement for active professionally manned medical review committees to serve in the area of cost and quality control; (c) the Medical Society should state clearly it will not condone excessively high incomes resulting from excessive fees, poor quality of work and fraudulent practices. On the other hand, the Society must recognize that the exceptionally talented or hard-working physician is entitled to his just reward provided his income is earned honestly and at no sacrifice of standards, and; (d) continuing support of the economics council study of such items as the overall problem of medical manpower, consideration of various forms and combination of forms of payment for rendering medical services, and practice management.

The foregoing constituted a reiteration of policy established at C.M.A. Council in June and were endorsed by Council. Council resolved that the Medical Advisory Committee to Maritime Medical Care Inc. be requested to be renamed the "Medical Review Committee" to conform with national practice. In conclusion, Council approved continuation of the Federal-Provincial sharing arrangements for medical economic data.

ARCHIVES COMMITTEE REPORT – Dr. C.J.W. Beckwith's recommendation that the Committee be renamed the Committee on *Medical* Archives was approved and that the addition of the term "Joint" should also be considered, thus recognizing the active participation of the Dalhousie Medical Alumni Association, the Provincial Medical Board, the Faculty of Medicine, the Kellogg Library and the Society. Also approved was his recommendation that medical students be employed during the summer to assist in the work of the Committee and that funds be made available for this purpose. Having served three years as committee Chairman, Dr. Beckwith turned in his resignation. Dr. Beckwith received a vote of thanks for his remarkable efforts and development of this most important project.

WORKMEN'S COMPENSATION BOARD REPRESENTATIVE – Dr. G.H. Cook reported that relations with the Workmen's Compensation Board during the past year had been excellent and that no problems of any consequence had been encountered. He attributed this to the periodic attendance at branch meetings of representatives from the W.C.B. His recommendation that this be continued was approved.

HOSPITALS COMMITTEE – Dr. B.C. Trask reported on a Meeting of the Provincial Liaison Committee on Nursing (membership from N.S.H.A., Medical Society and Registered Nurses' Association of Nova Scotia) at which the subject of staffing of intensive care and coronary care units was discussed at length. Arising out of this was a recommendation by Dr. Trask that the Medical Society support the R.N.A.N.S. in its approach to the Nova Scotia Hospital Insurance Commission for recognition of the requirement that nurses undergo specialized training prior to service in these units and that financial assistance be available to encourage and enable nurses to take such courses. Additionally, as the courses do not, at present, exist the Society approved a recommendation that it support the Liaison Committee on Nursing in its attempts to establish and prepare such a course.

PROVINCIAL LIAISON COMMITTEE ON NURSING – Dr. F.J. Barton reported on the Meeting referred to above. His report stressed the point that many problems require detailed and careful attention by a variety of agencies if there is to be some assurance that adequate standards will be set and maintained in these units. In tendering his resignation, having served three years, Dr. Barton added that the topic of staffing of coronary and intensive care units will be an important subject occupying the attention of this Committee for some time to come.

EDITORIAL BOARD REPORT – Dr. D.A.E. Shephard reported that the Nova Scotia Medical Bulletin, although just completing its 50th year, was still encountering financial difficulties and would require the continuing support of Society membership, as advertising alone could not possibly carry the entire financial burden. His

Report stressed the necessity of member-feedback and contribution if the Bulletin is to fulfill its purposes in the areas of medical communication, enhancement of unity within the Society and development of improved relationships between physicians in the community. Although the Editorial Board will continue to solicit material it would much prefer voluntary contributions on any subject and in any form. The Editorial Committee budget was approved. Dr. Shephard advised the meeting that he was leaving Canada at the end of the year and that the Society would appreciate a volunteer stepping forward for the office of Editor. Dr. Shephard received a vote of thanks for the excellent performance as Editor of the Bulletin during the past two years.

CANCER COMMITTEE – Dr. J.A. Aquino reported that the incidence of invasive carcinoma of the cervix remains high at 47.0 per 100,000 women at risk (age 20 or over). Although the population appears to be well-informed and doctors are utilizing the pap smear at an ever-increasing rate, there are still patients not taking advantage of the availability of the test. To this end, Dr. Aquino's Committee recommends that since a significant number of these women will be admitted to hospital for some other illness, medical staffs of all hospitals inaugurate cytology programs for the detection of uterine cancer in all female patients over 20 who are admitted to hospital.

MEDICAL SOCIETY REPRESENTATIVE TO CANADIAN CANCER SOCIETY – Dr. J.A. Aquino reported that the Nova Scotia Division of the Canadian Cancer Society is stressing the advancement of the cytology programs and they are continuously encouraging their units to promote it as well. The Cancer Society is embarking on a new and revised educational program which should dispel the general fear of cancer, as well as improve the general health habits of people generally. He reported that the variety of drugs available for treatment of cancer patients is increasing and improving. However, in spite of the fact that these can be given on an outpatient basis, there are still many people who cannot afford them, the consequences are misuse of hospital beds in order to ensure that the patients are able to get the drugs. The Cancer Society is contemplating an approach to government to develop an arrangement whereby these drugs would be available on an outpatient basis.

C.M.A. COUNCILS – The Reports of Dr. E.J. Cleveland, Dr. D.C' Brown, Dr. J.A. Myrden and Dr. D.B. O'Brien were all most comprehensive and gave Council a complete picture of the extent and nature of the endeavours of the various C.M.A. Councils. The details of their reports, which should be of interest to all physicians, are available through branch representatives to Council or the Medical Society office.

MARITIME MEDICAL CARE INC. ANNUAL REPORT – Dr. T.B. Murphy's report summarized the activities of M.M.C. during the past year in relation to administration of M.S.I., operation of the Pharmacare Plan, inauguration of the Dentacare Plan, operation of the Medical Advisory Committee, and educational programs for doctors and administrative staff on M.S.I. claims processing. Dr. Murphy expressed the Corporation's appreciation to the Medical Society for its continuing co-operation and support.

V.O.N. HOME CARE PROGRAM – Dr. A.G. Cameron in his Report set out the highlights of a submission by the Welfare Council to the Minister of Public Health regarding a co-ordinated care program. It is a program designed to provide co-ordinated medical and related services to selected patients at home through a formally structured group comprising of at least a family physician, a public health nurse, and a social caseworker assisted by clerical help. His report set out the details of the program in terms of services, demand, costs, objectives, etc. However, the main thrust is directed to the co-ordination aspect (which was recommended in the Task Force Reports as an important feature in controlling costs of health services) yet at the same time maintaining desirable standards. Council approved his recommendations that the Medical Society endorse the concept and approach Government in an effort to get the program underway.

PUBLIC HEALTH COMMITTEE REPORT – Council considered an excellent detailed report by Dr. A.C. Walkes which described the scope of the threat of environmental pollution from every conceivable aspect. The various recommendations in his report will provide the basis for a Brief to the Provincial Government in early December. This Brief will set out the Society's concern and recommend policies in terms of legislation and establishment of standards to prevent further environmental deterioration. Dr. Walkes was commended for his most informative report. Recommendations of particular interest to all members of the medical profession are as follows:

Air Pollution

(1) A Clean Air Emission Charge on sulfur oxides emissions to be developed to stimulate the reduction in these harmful emissions called for by regulatory requirements and goals. The funds generated by this charge will enable the province to expand programs to improve the quality of the environment.

(2) A tax on the lead additives used in gasoline to act as an economic incentive to increase the production use of unleading or lowleading gasoline.

Water Pollution

(1) The creation of a provincial Environmental Financing Authority to ensure that municipalities can finance their share of waste treatment plant construction cost.

(2) The authorization of funds through the Financing Authority, specifically for the construction of municipal waste treatment plants.

(3) Statutory formula for treatment plant construction to permit construction of plants where need is greatest.

(4) The requirement that municipalities provide for meeting future waste treatment needs on a reasonable self-sufficient basis, including recovery from industrial users of the portion of construction costs allocated to the treatment of their wastes.

(5) That water quality standards include specific effluent limitations for individuals sources of pollution.

(6) That there be provincial effluent standards for hazardous substances and that new industrial facilities use the best practicable technology to enhance and preserve water quality.

(7) That the Chairman of Water Resources Commission enforce the water quality standards.

(8) Elimination of cumbersome law enforcement machinery in the field of pollution.

(9) The authorization for legal action by private citizens against violators of standards.

(10) Authority for the Chairman to require that persons responsible for discharging effluent into waterways report on the nature and amount of such effluent.

(11) That the province request more Federal assistance to broaden and improve this pollution control program.

Pesticides

(1) Pesticides should be registered in one of three categories – general use, used only by a trained applicator, used only with a permit for each application – to ensure protection of human health and the environment.

(2) That there be provisions for appeal from a cancellation by the Chairman of the Water Resources Commission of a pesticide registration.

(3) Authority for the Chairman to stop the sale of any pesticide that is in violation of Provincial or Federal Laws.

Recycling of Wastes

(1) That the Province encourage development of products with high content with recycled waste.

Toxic Substances

(1) Authority for the Chairman of the Water Resources Commission to restrict the use or distribution of any substance which he finds hazardous to human health or to the environment.

(2) Authority for the Chairman to stop the sale or use of any substance that violates the provisions of the legislation and to seek immediate injunctive relief when use presents an imminent hazard to health or the environment.

(3) Authority for the Chairman to prescribe minimum standard tests to be prescribed on substances.

Noise

(1) Authority for the Chairman of the Water Resources Commission to set noise emission standards for construction and transportation equipment and to require labelling of the noise characteristics of other products.

Land Use

(1) That the municipalities be encouraged to enforce the building standards embodied in the Public Health Act and other Acts.

(2) That the Province regulate land use around major growth areas such as airports, highway interchanges, recreational areas and new communities.

Wilderness Areas

(1) That there be expansion of the wilderness areas.

Mining Area Protection

(1) That the Province develop programs to regulate environmental consequences of surface and underground mining.

His report also set out approaches to problems in terms of control of solid waste, control of water pollution, control of air pollution and control of noise pollution, all of which were approved by Council as policy of the Medical Society.

PUBLIC RELATIONS COMMITTEE – Dr. O'Brien's report summarized the Public Relations Committee activities for the past year. His report covered those areas of obvious and public action over the period but did not specifically enumerate continuing meetings and liaison between the consultants, the Society, Sections within the Society, Government representatives, and members of various civic organizations. The Committee and Consultants have participated in a variety of projects, examples of which are preparation of a Brief to Government on Environment, action relating to the North–End Community Clinic, conduct of the workload study, promotion of the Dalhousie Faculty of Medicine Seminar on Highway Facilities and a variety of other projects, not the least of which was assistance to the Society's Drug Abuse Committee.

MEDIATION COMMITTEE & DISCIPLINE COMMITTEE – Dr. Woodbury reported that the Society was receiving an increasing number of complaints each year and these varied from problems relating to billing above tariff, excessive charges for services rendered, unprofessional conduct, refusal of services, etc. These complaints were all dealt with through the Mediation Committee and for the most part have been resolved or are expected to be so. The Discipline Committee did not meet during the year. However, Dr. Woodbury noted for the interest of members that a complaint regarding one of their peers has been made to the Provincial Medical Board. It concerns his ability to practice medicine with adequate skill and knowledge.

MATERNAL & PERINATAL HEALTH COMMITTEE REPORT – Dr. D. W. Cudmore's Report contained a summary of his Committee's activities for the past year. Subjects dealt with were maternal death investigations, formation of further hospital perinatal committees, collection of data and analysis of results, investigations of perinatal deaths, publication of data and consideration of the therapeutic abortion subject. His report included tables of relative statistics which should be of interest to all physicians practicing in this field. These are available for perusal through local maternal and perinatal health committees. In summary (1) the work of collection and analysis of mortality statistics continued to provide an important source of information on the quality of obstetrical-neonatal care, and upon changing pattern of practice. (2) The high stillbirth rate in Nova Scotia and the other Atlantic Provinces continues as before, with no significant change over the last six years in Halifax or the province as a whole. The Halifax stillbirth rate, though a little lower than the rest of the province, is still unacceptably high. The large majority of these deaths come from a small minority of the reproductive population. (3) There has been no change in neonatal mortality in Nova Scotia in the past year, the rate being twice as high in the rest of the province as in Halifax. It would appear unlikely that further reduction in neonatal mortality will take place in Halifax until the community as a whole is able to accept that prematurity, associated with 75% of neonatal deaths, is to some extent a social disease which can be alleviated by a broad-based community health program. The excessively high neonatal mortality in the rest of the province is obviously dependent upon the quality of medical care and facilities available to the sick neonate, and its lowering will depend upon upgrading the delivery of presently available care. (4) A further worsening of the selection of hospital for high-risk deliveries has occurred over the last year. It would seem that the trend to keeping high-risk pregnancies in medium size hospitals instead of referral to high-risk obstetrical facilities as noted in 1969 has continued. (5) Further perinatal committees have been set up in one area of the province, and attempts to encourage this trend will continue. Individual perinatal investigation forms are now sent to each physician, and analysis will be carried out at the end of the year. (6) The Committee is in a difficult financial situation, funds are becoming more difficult to obtain, and a member of the Committee has had to take over secretarial, typing and data collection chores. A further source of funds is now required.

Arising out of consideration of Dr. Cudmore's reports was approval of the following recommendations: (1) The Society should continue to support the functions of this Committee with the Committee continuing to function in its present capacity, (2) We should approach the Provincial Government to set up the mechanics of collection and analysis using weight definitions, and work with government agencies in their interpretation (3) An active program for reduction of stillbirths be initiated. In Halifax, all pregnancies be graded for risk; a pregnancy register to be set up, with public health nurses to help; high risk and specific disease clinics be set up and supported by the Department of Maternal and Child Health in conjunction with the Obstetrics Department, in co-operation with the two hospitals but no duplication or competition. All high-risk pregnancies be managed in these clinics, public and private. A perinatal intensive care referral unit be set up, without interhospital competition. In the non-Halifax areas, a pregnancy register and high-risk grading should be set up, all the high risk pregnancies be cared for by regional clinics. The physicians of this Society should support the concentration of high risk facilities and clinics even to abrogating some control of the care of their patients for this kind of care, (4) Neonatal mortality reduction in Halifax has become as low as present medical skills will allow. A community reproduction health program should be begun, supported by the Halifax physicians. Money to support such a program would be a good deal less than the increasing costs of care of ill premature and the damaged infant. In the non-Halifax regions the major present reduction in neonatal mortality can be obtained through better organization and use of care facilities. All ill newborns with a poor chance of survival should be transported early in their illness to the Izaac Walton Killam Hospital. These plans should exclude the infants born in Cape Breton **providing** that the hospital administrations and physicians of that region will promote a single neonatal I.C.U. to serve the whole region. This Society should exert all possible pressure to bring this about with utmost speed, as the mortality in this region is almost unbelievably high, (5) A physician survey should be carried out to understand the reasons for holding high risk obstetrical patients in medium size hospitals, instead of referring them to high risk units where labor monitoring is available. For instance, to what extent do physicians accept that a high risk pregnancy is high risk to the fetus, and the outcome of the

pregnancy is often dependent on the degree of sophistication of the neonatal care facilities, (6) Hospital accreditation bodies should be approached to make the setting up of perinatal committees in hospitals mandatory, (7) The newly-initiated data collection forms sent to record rooms be continued, the doctor's name not being necessary in future. This last had previously been requested in order to send out individual perinatal forms, now carried out by the local record room staff.

PHARMACY COMMITTEE – Dr. John F. Cox reported that in the view of the Pharmacy Committee, the cost of prescription drugs to patients is to some extent generated by the physician's choice of drugs. It therefore becomes desirable to assist the patient through giving consideration to this factor when prescribing drugs. His committee's proposal that the Society develop, in co-operation with the Nova Scotia Pharmaceutical Association, a comparative cost drug index for distribution to provincial pharmacists and physicians was referred back to the Executive Committee for clarification. The main factor for this decision being that this information is apparently already available through other sources. Dr. Cox's Committee Recommendation that the Society endorse amendments to Legislation to permit Pharmacists the right of product selection was withdrawn as it was established that the policy of the Medical Society on this subject is already clear. Product selection by pharmacists is *not* permitted without the written approval of the prescribing doctor. The matter of prescription labelling was discussed following which it was approved that all prescriptions *must* be labelled with the brand or chemical name and strength of the preparation unless otherwise specified by the prescribing physician. Council also endorsed the recommendation that prescribing physicians give greater care and consideration to the time period for which drugs are prescribed in relation to the patient's safety and financial implication.

MEMBERSHIP COMMITTEE REPORT – Dr. N.G. Glen reported that membership in the Medical Society continued to increase and now totalled 911 members of various categories However, his Committee was still concerned with the large number, approximately 225, who have chosen not to support the Society. As the Medical Society is recognized in Government and professional circles as representing the medical profession in Nova Scotia, his Committee believes it deserves the support of all physicians in Nova Scotia.

Council approved his Committee's recommendation that medical students for all years, including interns, be members of the Medical Society of Nova Scotia with provision being made for their representation on the Executive Committee, Council and at the Annual Meeting. As well, medical students will be permitted and encouraged to participate in most Committee activities of the Society.

Continuing on the theme that all members of the medical profession in Nova Scotia should contribute to the cost of operation of the Society, it was recommended that negotiations be entered into between the Society and the Provincial Government, in an effort to devise a means of compulsory deduction of Society dues, in recognition of the Society being the negotiating agency for the whole medical profession in the Province. A motion that would provide that granting an annual renewal of a license to practice medicine in the Province of Nova Scotia be conditional upon membership in good standing in the Society was defeated. An additional motion "that the Medical Society of Nova Scotia arrange with the appropriate Government agency to collect a sum of money from each physician licensed to practice in the Province of Nova Scotia, such sum of money to be determined by the Medical Society of Nova Scotia as that portion of its total budget used for negotiation of fee revision and that this sum of money be turned over to the Medical Society of Nova Scotia was defeated. It was the general consensus that not only would this be a most difficult figure to arrive at but the Society is still a voluntary organization and the emphasis should be directed to encouragement of members of the medical profession to assume their responsibility in relation to Medical Society activities which are conducted on the behalf of all practicing physicians in the Province.

MEDICAL EDUCATION – Dr. J.E. MacDonell's Report recommended the second step in the development of a broadened program of continuing medical education. In November of 1970 the Medical Society took the decision to promote the use of medical audit as the chief method of community based continuing medical education in hospitals of Nova Scotia designated as teaching centres, which are more or less the Provinces's regional hospitals as they are commonly known today. At the moment, facilities for conducting a medical audit program exist in nine community hospitals in Nova Scotia provided by the N.S.H.I.C. as an approved item. A medical audit program consists of two primary components and, using the trade names of the system used principally in Nova Scotia, they are PAS (Professional Activity Study) which is a system of providing access to the information in the Hospital's clinical records and MAP (Medical Audit Program) which provides a method of evaluating care in all branches of medicine using the data and information arising out of the PAS system.

Arising out of discussion of the Medical Education Report were the following recommendations: (1) that the N.S.H.I.C. be requested to extend these facilities to those community hospitals requesting this service; (2) that the Division of Continuing Medical Education be asked to appoint a field director to undertake the development of detailed mechanics of setting up medical audit programs and; (3) that organizational steps be taken in individual hospitals to prepare for introduction of the programs; (4) that the Provincial Medical Board be requested to raise the sum of $25,000 per year, which is the estimated cost of the program, by raising the annual license fee and that these funds be designated for this particular program, being passed to the Medical Society in trust for accounting purposes; (5) that the Division of Continuing Medical Education be requested to undertake the supervision of this program.

DRUG ABUSE COMMITTEE – Dr. F.A. Dunsworth's Committee reported serious concern re abuse of Methadone, which is a synthetic opiate-like drug and basically a fairly strong analgesic found to be of value as a substitute for heroin. It is also addictive. This drug, though obtained through legal sources, i.e. physicians prescribing, is finding its way onto the "street" and being peddled, producing Methadone addicts. The veracity of a claim that a person is a heroin addict and requires Methadone is impossible to evaluate by the average busy practitioner. His committee recommended certain controls be instituted.

The policy adopted by the Medical Society is (a) that the Nova Scotia Pharmaceutical Association be approached to designate one pharmacy in each population area as the only pharmacy to fill Methadone prescriptions; and (b) that the prescribing of Methadone as a heroin substitution therapy by physicians be restricted voluntarily to those physicians with special interest and experience in the field of drug addiction; and (c) to develop a list of physicians skilled in this therapy. Interested physicians may contact the chairman of the Drug Abuse Committee for further information on this subject. During discussion of Dr. Dunsworth's report, support of his Committee's contentions came from all areas of the Province. Dr. Dunsworth noted the achievement of the Society by virture of the policy established last year in the matter of amphetamine abuse and hoped that similar results could be achieved by the action taken today. Several speakers urged that all physicians concern themselves to a far greater degree with the drug abuse problem. The relationship between drug abuse and increasing criminal activities and violence cannot be denied. Physicians have a major responsibility to society in this regard. Dr. Dunsworth was given a round of applause in appreciation for the work of his Committee.

TRAFFIC CRASH COMMITTEE – Dr. S.F. Bedwell's recommendation that the Traffic Accidents Committee be renamed the Traffic Crash Committee was approved. His report noted that the word "Accident" implies an act of God or stroke of fate and not the predictable result of an error in judgment on the part of the driver(s). Arising out of discussion of this report together with Dr. Bedwell's report on the activities of the Medical Advisory

Committee on Driver Licensing was a policy position on various aspects of this problem. The Traffic Crash Philosophy of the Medical Society embodies the following principles: (a) driving is a privilege; not an inalienable right; (b) crashes must be prevented rather than paid for; (c) the public must be highly trained in motor vehicle operation; (d) the penalty for hazardous driving habits should be sufficiently harsh to discourage persons from operating a motor vehicle in this manner; (e) persons who are injured as a result of car crashes must receive exemplary medical care. Also forming part of Society policy were the following: (a) first aid instruction shall be mandatory for all drivers; (b) the training of ambulance driver attendants be mandatory preparatory to their employment as such and that the responsibility for this shall rest with the local Medical Society; (c) local Medical Societies shall be responsible for conducting periodic assessment of emergency care; (d) that local citizen crash committees, with Medical Society members, shall have the right and duty to conduct periodic crash assessment together with review of indicated measures to prevent needless repetition of injury.

The Medical Society also set forth its position with respect to the blood alcohol sampling relative to when it should be done and to whom it should be reported. The related resolution passed by the Society reads as follows: "THAT in traffic crashes involving injury to any individual it shall be mandatory that the driver of the vehicle or vehicles involved should have a blood alcohol level estimation done. Dr. Bedwell and his Committee received a vote of thanks from Council for their fine effort in bringing the Society to the point where it established policies in the very serious matter of traffic crashes, with such policies forming the basis for a series of Briefs to Government.

REHABILITATION COMMITTEE REPORT – Dr. B.S. Grogono's Report noted that the Camp Hill Complex which would include a Rehabilitation Centre having full facilities for physiotherapy, occupational therapy and prosthetics still awaited treasury approval. It was also noted that the need for improved facilities in active, convalescent and rehabilitative phases of patient treatment still existed and the Medical Society endorsed a proposal that the Provincial Government pursue resolution of this problem with increased vigor. As it had recently come to the attention of the Society that the Nova Scotia Orthopedic Brace Centre was approaching a crisis situation as a result of Government's staged withdrawal of subsidy, Dr. Grogono reported on the circumstances of the Centre. He decribed in detail the activities of the Centre, the nature of the service it provided, how the cost of its expensive products was met and the value of its services to the Province as a whole. His Committee's conclusion was that the Brace Centre fulfills a definite need but is operating under difficult financial and physical circumstances. Removal of the subsidy and establishing a "pay if you can" arrangement will result in a seroius hardship for many people, not to mention the indignity being imposed by application of the means test. Dr. Grogono's recommendations that the Society support the Board's request for a continuation of the Grant, that urgent consideration be given to improving the facilities and developing methods of cutting production costs by design improvement, as well as development of some arrangement to make its services available through a form of Government Plan were endorsed by the Society. Also endorsed was his proposal that there be improvement of liaison between the Brace Centre and the clinical situation.

LEGISLATION & ETHICS – Dr. C.H. Graham's Report dealt with Good Samaritan Legislation, relations with Chiropractors, and the problem of personal privacy relating to computer information. A recommendation that the Society support introduction of legislation providing protection from action for damage to persons voluntarily rendering first-aid as a result of an accident was defeated on the basis that the Medical Act was already adequate for medical doctors and the laws of the land already provided adequate protection for all other personnel provided they did not attempt to exceed their own personal limitations. Dr. Graham's recommendation that there be no further discussions with Chiropractors was referred back to his Committee for re-evaluation.

SECTION OF INTERNAL MEDICINE – Dr. G.R. Langley in reporting on the discussions his Section had held recently regarding the changes in organization of the Canadian Medical Association as well as other developments in the practice of medicine gained approval of the Society that it re-examine the composition and representation of its Executive Committee with a view to developing Executive Committee membership appropriate for the Society. It was observed by the chair that an Ad Hoc Committee chaired by Dr. W.F. Mason had already been struck by the Executive Committee for this purpose. In all likelihood it would report its findings to the Society on the occasion of the next Annual Meeting.

BY-LAWS COMMITTEE – Dr. P.D. Jackson's Report to Council recommended the following changes to the composition of Council (a) all living past presidents of the Society as opposed to just the last four living past presidents be members of Council, (b) also to be members of Council are Chairmen of C.M.A. Councils, Chairman of the Provincial Health Council, and Dalhousie University Vice-President for Health Sciences when each of these are ordinary members of the Medical Society of Nova Scotia. Additionally, the Society approved By-Law amendments relating to the decisions taken regarding student membership in the Medical Society.

ANAESTHESIA STANDARDS COMMITTEE – Dr. S.B. Donigiewicz reported that during the year his Committee had established increasing contact with physicians administering anaesthetics for the primary purpose of discussing the quality and safety of practice in this specialty. Dr. Donigiewicz said that his Committee will welcome to its membership surgeons, hospital administrators, and any other physicians interested in improving the standard of anaesthesia service in Nova Scotia.

FINANCE COMMITTEE – Dr. T.M.F. Roberts' Report included the financial statements for the fiscal year ending September 30, 1971, prepared by H.R. Doane and Company of Halifax. A net loss of $1,001 for the fiscal year ending September 30, 1971 was reported.

Dr. Roberts reported that expenses were expected to increase approximately $28,000 in the fiscal year 1972. In the main these are made up from the following: Increased salaries for Mr. Peacocke and his staff plus provision for an additional staff member commencing January 1, 1972, costs arising out of staff increases, such as furniture, insurance, pensions, etc., increased rates for remuneration of members travelling on Society business, increasing office expenses arising out of inflation and a decision to allocate a maximum of $100 to each of the Branch Secretaries and Section Chairmen for payment for services such as typing, filing, record-keeping, etc. done on behalf of the Medical Society.

The Medical Society approved the recommendation that there be an increase in regular member dues for fiscal 1972 of $45 per member and that dues increases for other categories of membership be increased proportionately.

Concern was expressed by some members that the increased membership costs might result in some resignation; however, recognizing that in most instances this was tax deductible and that physicians generally were appreciating more and more the need for expertise in their staff, particularly in relation to medical economics and negotiations with Government and other agencies, Council approved the proposal.

RH COMMITTEE – Dr. R.S. Grant's Committee reported on a very active group concerned with problem pregnancy cases of fetal-maternal RH incompatability. The Committee reported results that were extremely satisfying to those directly involved and expressed sincere gratitude to the Medical Society and the Provincial Department of Health for its continuing support of this Project.

Before voting Dr. Grant and his Committee appreciation for their excellent work, the Society approved the following recommendations. (1) That the Society endorse the principles and practice of this Committee. (2) That any RH Negative gravida with antibodies should be considered a high risk case and be referred to the central RH Committee for management, and (3) That the physicians of the Society endorse the practice of having RH testing done on pregnancy patients at their *first* visit, and then follow closely the suggested outline of management supplied to them by the RH Committee, for patients having blood antibodies.

GENERAL – The following reports were received for information, their contents being noted and no resolutions made regarding their contents. Medical Society Representative to the Nova Scotia Board of Examiners Nova Scotia Association of Social Workers – Dr. E.A. Smith; Mental Health Committee – Dr. E. Ryan; Medical-Religious Liaison Committee – Dr. D.C. Brown; Representative to Board of Registration of Certified Nursing Assistants – Dr. M. Duncan; Section for Pathology – Dr. H.B. Lang.

Dr. R.S. Murphy, reporting for the Section for Ophthalmology & Otolaryngology, noted that increasing interest was developing in the use and training of ophthalmic assistants by Ophthalmologists and indicated a requirement to establish an organized course in Halifax under the direction of Dalhousie University. It was the belief of the Section that this matter should be considered by the Nova Scotia Health Council.

Dr. F.A. Dunsworth reported briefly on major subjects to which the C.M.A. Board of Directors had given consideration during the year. He noted an item of particular concern is communications between members, the divisions, and the Canadian Medical Association, and this matter would be given continuing consideration during the forthcoming year.

Dr. John J. Quinlan, on behalf of the Nova Scotia Tuberculosis and Respiratory Disease Association, expressed his sincere appreciation to the Medical Society and its members for their co-operation in participating in the survey regarding incidence of chronic respiratory disease in Nova Scotia last year. The results of the survey were surprising and indicated that Nova Scotia still has a major problem in the chronic respiratory disease area. He noted plans for broadening of the study and requested that the Society and its members co-operate in continuing surveys.

NOVA SCOTIA HEALTH COUNCIL – Dr. J.F.L. Woodbury, Medical Society nominee to the Council informed the members that the Council is an advisory body to the Minister of Public Health and its primary role is long term planning and development of health policy on his behalf. At the moment the Council has established Task Forces to study a variety of problems for the Minister. These include adequacy of dental services in the Province, vision care services, the situation relative to drugs costs, the matter of use of physician assistants, as well as studying the updated Beds and Facilities Report which is expected to be released about December 11. The Executive of the the Council, of which Dr. Woodbury is a member, is considering the K.P.M. Report of Health Services Integration which, among other things, recommends the merging of the Medical Care Insurance Commission and the Nova Scotia Hospital Insurance Commission, along with the policy and operational functions of the Department of Public Health. This is a particularly complex matter and is being given very careful consideration before a recommendation is made to the Minister.

Arising out of discussion of the activities of the Council was the defeat of a resolution to the effect that the Society recommend that a member of the Section for General Practice be named to the Provincial Health Council. It was explained to Council that the Medical Society was the only organization which was permitted under the Act to nominate a representative of its organization. The Society had submitted a list of six – three general practitioners and three specialists – to the Minister for his consideration. The individual chosen represents all members of the medical profession, specialist or otherwise. Dr. Woodbury agreed that in many instances there is a requirement for input of special knowledge (e.g. in the area of Family Practice) in the functioning of some of the task forces. In these instances the appropriate Section will be asked to name members to serve as requested.

SPECIAL RESEARCH GROUP – Dr. P.E. Kinsman was ill and Dr. Woodbury delivered his Committee's report on his behalf. Following Dr. Woodbury's summary, the original resolution establishing the Special Research Group in November 1970 was reviewed. It was the consensus of Council that the Group had been less active than had been anticipated and had not succeeded in generating the interest and discussion on such important matters as the Task Force Reports, the Beds and Facilities Reports, the K.P.M. Health Services Integration Report as had been expected. Some members expressed the view that the Group should have provided in this time period some clearly defined positions and policies for Council to consider on this occasion. Council was informed that the Society members themselves and particularly Branch Representatives, who are members of the Special Research Group, must share responsibility for the Group failing to achieve what some members expected of it. Time after time it had been suggested as an Agenda item for Branch Meeting discussion but in many instances, complete lack of knowledge of the contents of some of the Reports which had been provided to Branches was apparent. The Nucleus Committee of the Special Research Group had tried repeatedly to encourage participation of members in discussion of various proposals being considered, for example the Health Council. Appreciating these points, Council still was of the opinion that the Special Research Group must become more active and take a stronger hand in dealing with the problems facing organized medicine today. The Council directed the Officers and the Executive Committee to correct this deficiency as soon as possible and ensure the membership of the Society receive more and better advice in this whole broad area of planning for health and medical facilities.

SECTION FOR GENERAL PRACTICE – Dr. E.B. Johnson's Report was received for information, it being a comprehensive outline of the activities of the Section during the past year. Dr. A.R. Parsons inserted for the record an additional paragraph reading "At the request of the Medical Society of Nova Scotia the matter of recognition of Certificants of the College of Family Practice by the Provincial Medical Board Specialty Register was discussed. At the recent semi-annual meeting a motion that these Certificants be so recognized was passed by a close vote." Discussion of this subject resulted in Council concluding that such action at this time, when all details and ramifications are not entirely clear, had the potential of being a devisive issue within the Society. It was agreed that the matter needed further study and that no decision as to whether or not Certificants should be listed in one way or another in the Provincial Medical Board Register should be taken for one year.

NEW BUSINESS – Dr. Woodbury informed the members that in the opinion of the Medical Care Insurance Commission and the Presidents' Liaison Committee, the existing arrangements for payments for pap smears is not entirely adequate and that in many instances there should be no extra charge. Agreeing with him was the Section for Obstetrics and Gynecology which had expressed the opinion that the pap smear should be included in a normal pelvic examination and consultant service for maternal care. A resolution to the effect that the performance of pap smears should be an integral part of pelvic examination and comprehensive physical examinations and that the fee for such comprehensive examinations represents adequate payment for the procedures including the taking of pap smears, that payment for these cytological examinations be placed in List I of the Fee Schedule thereby causing it to be an additional charge only when performed as the sole reason for the visit was defeated.

Dr. McPhail spoke on the subject of the manner in which the Chronicle Herald had reported the results of Fee Schedule Revision. It was his opinion that their actions were irresponsible

and an insult to the profession. He wished the record to show that this subject had been considered by Council and expressed its manifest dissatisfaction with the actions of the Paper.

Provincial Health Minister, D. Scott MacNutt, in a freewheeling question and answer session confirmed his reservations about global budgeting – agreeing with former Dalhousie Medical School Dean, Chester Stewart, that it could lock Nova Scotia into a health care system below the standards achieved by the more affluent provinces – and said he and other provincial health ministers would put forward arguments against it in upcoming Ottawa meetings.

The Minister regretted he was unable to confirm Cabinet approval of our twice-revised Fee Schedule at the time of the Annual Meeting but did confirm M.C.I.C. approval and his personal support for the Schedule during Cabinet discussions.

NOMINATING COMMITTEE REPORT – Dr. J.F.L. Woodbury's Report named Society members to the 1972 Executive Committee, Nominating Committee, and Officers of the Society. They are as follows:

1972 Executive Committee – Officers – President – Dr. G.W. Turner; President-Elect – Dr. J.A. Myrden; Past President – Dr. J.F.L. Woodbury; Chairman, Executive Committee – Dr. P.B. Jardine; Vice-Chairman, Executive Committee – Dr. J.A. McPhail, Honorary Treasurer – Dr. D.B. O'Brien; Honorary Secretary – Dr. W.F. Mason; Executive Secretary – Mr. D.D. Peacocke.

Branch Society Representatives – Antigonish – Guysborough – Dr. J.A. MacCormick (Alt.) Dr. J.R. Greening; Cape Breton – Dr. P.S. Gardner (Alt.) Dr. E.C. McDonagh; Dr. M.A. Smith (Alt.) Dr. R.G. Petrie; Colchester East Hants – Dr. P.C. Handforth (Alt.) Dr. K.B. Shephard; Cumberland – Dr. G.A. Lawrence (Alt.) Dr. H. Ali; Dartmouth – Dr. James A. Smith (Alt.) Dr. J.A. MacLennan; Halifax – Dr. J.H. Quigley (Alt.) Dr. I.D. Maxwell, Dr. D.F. Smith (Alt.) Dr. J.E.H. Miller, Dr. W.E. Pollett (Alt.) Dr. D.F. Folkins; Eastern Shore – Dr. S.W. Potter (Alt.) Dr. R.J. Fraser; Inverness-Victoria – Dr. J.C. Aucoin (Alt.) Dr. A.G. Coakley; Lunenburg-Queens – Dr. N.G. Glen (Alt.) Dr. J.B. Crowe; Pictou – Dr. J.F. Hamm (Alt.) Dr. J.K.G. Grieves; Shelburne – Dr. G.O.W. Davies-Webb (Alt.) Dr. W.H. Jeffrey; Valley – Dr. J.D. Henshaw; Western – Dr. C.W. MacNeil (Alt.) Dr. A.F. Weir.

Branch Representatives to Nominating Committee (1972) – Antigonish-Guysborough – Dr. T.W. Gorman (Alt.) Dr. J.A. MacCormick; Cape Breton – Dr. H.J. Devereux (Alt.) Dr. J.A. MacPhail; Colchester East Hants – Dr. A.C.H. Crowe (Alt.) Dr. F.E. Slipp; Cumberland – Dr. J.P. Donachie (Alt.) Dr. Arno Elmik; Dartmouth – Dr. J.A. Smith (Alt.) Dr. T. Tenderenda; Eastern Shore – Dr. R.J. Fraser (Alt.) Dr. S.W. Potter; Halifax – Dr. W.E. Pollett (Alt.) Dr. D.F. Smith; Inverness-Victoria – Dr. C.S. Chow (Alt.) Dr. R. Stewart; Lunenburg-Queens – Dr. W.I. Bent (Alt.) Dr. G.C. Jollymore; Pictou – Dr. H.A. Locke (Alt.) Dr. R.G. Munroe; Shelburne – Dr. J.H. Robbins (Alt.) Dr. F. Markus; Valley – Dr. H.R. Roby (Alt.) Dr. F.L.Akin; Western – Dr. M.W. O'Brien (Alt.) Dr. A.F. Weir.

PRESIDENTIAL ADDRESS – DR. J.F.L. WOODBURY – Dr. Woodbury's address as delivered to the final session of the Annual Meeting is contained verbatim in the December 1, 1971 issue of the Nova Scotia Medical Bulletin. □

ANNUAL MEETING EXHIBITS

The Medical Society of Nova Scotia wishes to express its sincere appreciation to those firms which exhibited at our Annual Meeting in November 1971 at the Lord Nelson Hotel.

LIST OF EXHIBITORS

Abbott Laboratories Limited
Anca Laboratories
Arlington Laboratories
Calmic Limited
Charles E. Frosst & Company
C.M.R.S.P. & Royal Trust Co.
Cow & Gate (Canada) Limited
Cyanamid of Canada Limited
Eli Lilly & Co. (Canada) Ltd.
Encylopaedia Britannica (Canada) Ltd.
Fisins (Canada) Limited
Geigy Pharmaceuticals
Glaxo-Allenburys
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I. B. M. Canada Limited
McNeil Laboratories (Canada) Ltd.
Mount Saint Vincent University
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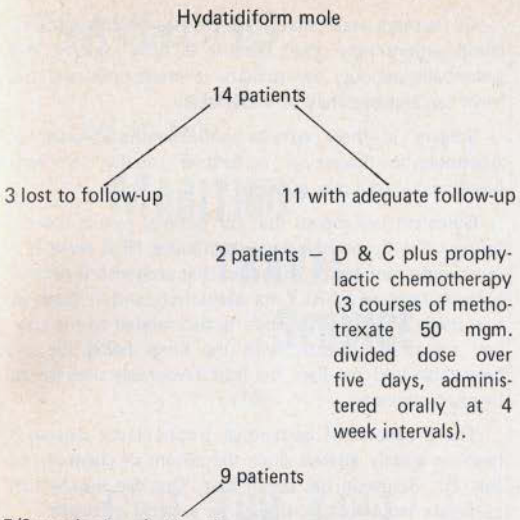
Poulenc Limited
Robins Company of Canada, A. H.
Strasenburg Co. of Canada Ltd., R. J.
Upjohn Company of Canada Limited, The
Winley Morris Company Limited
Winthrop Laboratories

Medical Society members appreciate the extensive financial contributions that exhibitors make toward defraying the costs of conducting an Annual Meeting. As well, the additional expense of preparing exhibits and arranging for the displays are also recognized. Most important, however is the opportunity the exhibitors have given to members of the Profession to meet with representatives of the various firms for discussion of new products and services available to them.

Members of the Society are encouraged to convey their gratitude by giving the exhibitors' representatives an extra expression of appreciation on the occasion of their next encounter. □

D.D.P.

Treatment and Follow-Up



3/9 or 33% developed PERSISTENT NON-METASTATIC TROPHOBLASTIC DISEASE. Two of these patients failed to have significant regression of their HCG titres within six weeks after evacuation of the molar pregnancy. The third patient's HCG titre reverted to normal endogenous pituitary gonadotropin levels for two months but subsequently rose to abnormal values. Two of these patients were treated with methotrexate, total dose 100 mgm., administered orally over a period of five days. One of these required two treatments, the other, one treatment. The third patient was treated with the same dosage of methotrexate, administered intramuscularly in divided doses over a period of five days and required two courses of therapy. All treatment courses were spaced at three to four week intervals.

All eleven patients are alive and well today, 18 to 72 months following completion of their treatment.

INVASIVE MOLE

The one case of invasive mole (post hysterectomy) – had persistent low, but abnormal HCG titres. She received two courses of methotrexate 50 mgm. orally in divided doses over five days at intervals of four weeks. She remains alive and well, three years following treatment.

CHORIOCARCINOMA – METASTATIC – TO LUNGS

This patient was treated with methotrexate, total dose 100 mgm. divided over five days. This regime was given four times spaced three to four weeks apart. She remains alive and free of disease four years later.

COMPLICATIONS:

I RELATED TO GESTATIONAL TROPHOBLASTIC DISEASE

(a) Hemorrhage (greater than 500 cc.)	7 patients
(b) Pre-eclamptic toxemia	1 patient
(c) Eclampsia	1 patient
(d) Hypertension	1 patient
(e) Theca-lutein cysts	3 patients
(f) Metastatic disease	1 patient
(g) Pyrexia	3 patients

II RELATED TO DIAGNOSTIC & THERAPEUTIC MEASURES

(a) Uterine perforation at curettage	1 patient
(b) Drug toxicity	3 patients

A common complication of this disease is uterine hemorrhage. This may occur during the spontaneous evacuation of molar tissue, or at the time of operative evacuation. Oxytocin infusion should be administered to prevent this from occurring. Ovarian theca-lutein cysts are not infrequently associated with molar pregnancies. These spontaneously regressed in our patients following the evacuation of molar tissue with return to normal levels of gonadotrophins. Uterine perforation at the time of curettage is a real threat and great caution must be exercised to prevent it from occurring. Toxicity from those drugs being used today in the treatment of this disorder can be anticipated, and although potentially serious, were not significant in the few cases treated at our institution. The side effects noted in our series consisted of mild leukopenia and moderate stomatitis. These occurred in those patients who received a total dose of 100 mgm. of methotrexate and were treated symptomatically.

Discussion

Hydatidiform mole is of great interest because of its close etiological relationship to malignant trophoblastic tumors. Most now agree that the malignancy rate subsequent to a molar pregnancy is 10-15% and not 2% as formerly thought. It is mandatory to follow these patients very closely because of the unpredictability of the biologic behaviour of the molar tissue.

All types of gestational trophoblastic tumors produce a hormone biologically and immunologically similar to human chorionic gonadotropin (HCG). The amount of HCG produced correlates with the volume of viable trophoblastic tissue present.[2] With accurate quantitation of HCG, an efficient method is available to enable the proper follow-up necessary for these patients and select those who require further therapy to completely erradicate their disease.

Possible confusion in interpreting HCG results while following a case of gestational trophoblastic disease can be avoided by suppressing ovulation. With the use of progestational agents, pregnancy with its associated HCG production, and in the non-pregnant female the production of

pituitary luteinizing hormone, which cross-reacts with HCG during the pre-ovulatory phase of the menstrual cycle can be avoided. Because of this concern, all of our patients were placed on ovulation suppressants following the diagnosis of gestational trophoblastic disease.

Routine immunological pregnancy tests have proven INADEQUATE as a dependable, sensitive method of determining abnormal levels of HCG in either urine or serum.[11] They are fine as long as the amount of HCG present exceeds the sensitivity of the test used. Hammond has stated: "the reliance on a negative pregnancy test would have resulted in failure to identify residual trophoblastic tissue in 25% of patients in their series."[12] Because of this, when gestational trophoblastic disease is thought to be present and a negative pregnancy test has been obtained, a more sensitive method is necessary to determine low but abnormal levels of HCG. Gestational trophoblastic disease is not erradicated until normal values of endogenous pituitary gonadotropin secretion have been obtained.[11]

At the Victoria General Hospital, the mouse uterine weight bioassay method is utilized for total gonadotropin determination once the immuno-assay has become negative. Women who are receiving progestational agents for contraceptives should maintain values less than 52 mouse units per 24 hour urine specimen.

Our patients are followed at the Gynecological Tumor Clinic, Victoria General Hospital with biweekly urine HCG determinations for the first six weeks, then monthly for one year. Chest X-rays and physical examinations are done routinely during this first year of follow-up. Pregnancy is allowed after one year of follow-up without evidence of exacerbation of the disease.

During the past 10 years therapy of gestational trophoblastic disease has undergone extensive revision. This disease is for the most part one which occurs in women of the early child-bearing age and preservation of the uterus often is desirable. It has recently been speculated by several authors[13,14] that chemotherapy, administered at the time of initial diagnosis and evacuation of the molar pregnancy, will decrease the development of invasive mole and choriocarcinoma. Furthermore, Tow[13] has suggested that certain "high-risk" women with molar pregnancy also undergo hysterectomy as an integral part of their treatment regime.

Chemotherapy using methotrexate and/or Actinomycin D has been very successful in the treatment of persistent gestational trophoblastic disease whether it is confined to the uterus or not.[9,15]

All authors state that with the use of chemotherapy, complications may result because of drug toxicity. While potentially serious, the toxicity is predictable and treatment can appropriately be undertaken.

Surgery in those women with metastatic gestational trophoblastic disease is performed usually to control bleeding due to tumor growth.

Goldstein has shown that for optimal results thorough follow-up with sensitive tests to monitor HCG levels is the most important factor. He notes that prognosis is best with patients referred EARLY for evaluation, and in those with low levels of HCG. Prognosis is also related to the site of any metastatic disease, with the lungs being the most favourable and the liver the least favourable sites for cure by chemotherapy.

The prognosis of gestational trophoblastic disease has been so greatly altered since the advent of chemotherapy that Dr. Goldstein has stated that "One can now virtually eliminate trophoblastic disease as a cause of death."[9] □

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MEDIQUOTE

"MEDICAL schools are a little like human beings. They grow old, are pleased with themselves and become set in their ways. They find it difficult to change. In fact there is a built-in response to oppose change. Hence, life and death. As the principal of the University of London used to remark when some of his committees had been unusually obstructive: 'While there's death, there's hope'." — **Sir George Pickering, in the British Medical Journal.**

ADVERTISERS' INDEX

The Role of Lymphography in the Management of Hodgkin's Disease and Carcinoma of the Cervix*

T. Y. Young B.Sc.,† and B. St. J. Brown, M.D., F.R.C.P.(C),†

Halifax, N.S.

Summary: *A review of two years' experience with lymphography in the management of 28 patients with Hodgkin's disease and 50 with carcinoma of the cervix is presented. The technique of lymphography is described, then the influence of lymphographic findings on the staging of these two diseases is discussed. Staging was altered in 39.3% of patients of Hodgkin's disease, while in cancer of the cervix lymphography added new evidence of disease in 26%. The authors emphasize two points: lymphography reveals evidence of unsuspected disease in some patients, and the technique provides additional information about these conditions which in some patients would not have been obtained by means other than laparotomy. Lymphography also offers an opportunity for surveillance, as the contrast medium remains in lymph nodes for several months. Lymphography is for these reasons considered to be a useful clinical aid in the management of these two conditions.*

Lymphography became readily available at the Victoria General Hospital, Halifax, in May 1968. In the ensuing two years, May 1968 to May 1970, 322 lymphograms were performed. The indications were varied but the two diseases comprising the largest groups were carcinoma of the cervix, in which an established diagnosis was made in 50 patients, and Hodgkin's disease, in which this diagnosis was proven in 28 patients. The purpose of the present paper is to review the rôle of lymphography in the management of these two groups of patients.

As reported in the literature[1,2] lymphography is helpful in the initial assessment of the extent of disease, in establishing activity or control of malignancy, and in the evaluation of suspected new lesions.

Technique

The Kinmonth technique[3] was used throughout this study. A coloured aniline dye, Alphazurine 2 G, in 1% solution with lidocaine 2% (without adrenalin) as a vehicle, was injected intradermally and subcutaneously into the dorsum of each foot at the first, second and third web spaces of the toes to a total of 1-2 ml on each side. Within a few minutes several lymphatic vessels are usually clearly identified beneath the skin of the instep; a cut-down cannulation of a suitable vessel was then made with a local anaesthesic using a gauge 27 or gauge 30 needle assembly. Ultra-fluid lipiodol was thereafter injected using an electrical pump (Viamonte-Hobbs§): the total dose of ultra-fluid lipiodol injected was according to recognized principles[4] and never exceeded 20 ml for an individual patient. These principles can be summarized as follows:

i. The oily medium always produces some degree of intravascular embolization, since the opacified lymph system empties eventually into the venous system, oily droplets then pass to the pulmonary circulation[5];

ii. Should there be significant pulmonary disease such that the pulmonary capillary bed is diminished and pulmonary function reduced by about 30% of normal, lymphography should not, in general, be performed;

iii. If the total number of lymph nodes in the body exposed to the oily contrast medium is reduced by 25% e.g., from diversion direct to the venous system as in lymphovenous communication in lymphatic obstruction, or by previous lymph node dissection or radiotherapy, lymphography should be done only with considerable caution using reduced volumes of ultra-fluid lipiodol;

iv. If venous obstruction is anticipated as in superior vena caval obstruction, again lymphography should either not be done, or be done only with great care because the oily contrast medium may back up in the thoracic duct and finally spill over into the venous system in a sudden burst, e.g. during coughing.

In the present series only minor complications followed the procedure. These were occasional *pyrexia* (1-3°F) within 24 hours, which responded to aspirin; *dyspnea* during the night following the procedure in one patient with superior vena caval obstruction but without unusual change in his chest radiograph, or subsequent problem during the following week; *delayed healing* at the site of

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injection in one cachectic patient. No serious allergic or hypersensitivity reactions developed; a few patients showed a local wheal after injection of the lidocaine – Alphazurine 2G solution; nor was there any incidence of local infection.

The coloured dye is excreted in the urinary tract within a few hours and the urine is visibly coloured during this period; in every patient the staining of the tissues of the foot disappeared within about three weeks. Only one patient had radiographic evidence of urinary excretion of the ultra-fluid lipiodol; there was faint opacification of the bladder but no clinical upset.

The literature suggests that lymphographic evidence can be interpreted accurately permitting excellent correlation with histologic findings, provided that strict criteria are employed,[1,6] as in the present survey. Davidson's series of 31 patients with Hodgkin's disease all of whom had biopsy of lymph nodes opacified during lymphography, showed that:

– 25 were interpreted as abnormal on the lymphogram and all these were confirmed as positive on microscopy;

– 2 others were interpreted as suspicious on lymphography and were reported as positive on microscopy;

– 4 were interpreted as normal on lymphography, but one of these was reported as positive on microscopy.[1]

Hodgkin's Disease

This disease is currently staged according to the following system (Rye classification, 1966[1]):

Stage I: Involvement of not more than two contiguous lymph node groups on the same side of the diaphragm;

Stage II: Involvement of more than one non-contiguous lymph node group on the same side of the diaphragm;

Stage III: Involvement of lymph nodes on both sides of the diaphragm; the disease is confined to lymph nodes only;

Stage IV: Involvement of non-lymphoid tissue;

A typical or special (S): involvement of spleen, stomach, or liver, for example, as an unusual presentation.

CLINICAL MATERIAL In 28 patients this diagnosis was proven by biopsy. Staging was applied to the clinical findings in each patient; lymphography then added new information which either did or did not alter the staging of the disease. A review of the 28 patients with Hodgkin's disease showing the clinical staging, any alteration of staging following the lymphographic evidence, and the evolution of the patients' condition subsequently, is summarized in Table 1.

TABLE 1

Prelymphogram Stage		Lymphogram Findings	Postlymphogram Stage	Follow Up (dating from initial lymphogram)
I	(5 patients)	1 pt: positive	– III	– Stage IV; died 18 mos. later
		1 pt: suspicious	Unchanged	– Stage III; clinically, later
		3 pts: negative	Unchanged	One pt – IV on repeat lymphogram; died 12 mos. later.
II	(14)	7 pts: positive	– III	3 pts – IV clinically, all died; one at 5 mos., one at 17 mos., one at 32 mos.
				4 pts unchanged; one died 16 mos. later.
		3 pts: suspicious	Unchanged	One pt on repeat lymphogram ⟶ III; one pt ⟶ IV clinically, one pt remained unchanged.
		4 pts: negative	Unchanged	One pt – IV clinically, died 18 mos. later; others unchanged.
III	(3)	3 pts: positive	Unchanged	2 pts – IV clinically, one pt remaining unchanged.
IV	(1)	1 pt: positive	Unchanged	Died 10 mos. later.
A typical	(4)	2 pts: positive	– III	Both died after 2 and 5 mos. respectively.
		2 pts: negative	Unchanged	One pt died after 2 mos., one remained unchanged.
Unknown	(1)	1 pt: positive	(Discovered as III)	Receiving chemotherapy.

From this detailed study, lymphography provided new information and changed the stage of the disease in a number of patients which can be summarized as follows:

11 patients (39.3%): Staging altered by a positive lymphogram.

4 patients (14.3%): Staging unaltered but the lymphogram showed suspicious changes.

13 patients (46.4%): Staging unaltered, the lymphogram being negative.

Regarding the accuracy of interpretation of the lymphographic findings, it is difficult in this series to draw any conclusion, since only one patient had post-lymphogram biopsy of an opacified node. The radiologic interpretation of the biopsied node, which measured 2.7 by 5.5 centimetres, was of some lymphomatous process; however, microscopy revealed only inflammatory changes. It is of great interest that repeat lymphography one and one-half years later showed evidence of Hodgkin's disease in both inguinal regions and elsewhere, and radiation treatment was given to both groins.

Carcinoma of the Cervix

The system of staging is that adopted in the Report of the Results of Treatment of Carcinoma of the Cervix.[8] This is a clinical staging applied at the time of diagnosis and initial treatment; it is customary to leave the stage unaltered for each individual patient and to add new

TABLE 2

Prelymphogram Stage		Lymphogram Findings	New Evidence of Disease	Follow Up (dating from initial lymphogram)
0	(4 patients)	1 pt: suspicious	–	Unchanged
		3 pts: negative	–	Unchanged
I	(10)	1 pt: positive	Metastatic spread equivalent to Stage IV disease	Died within 10 mos.
		9 pts: negative	–	One pt – equivalent to stage IV clinically, died 14 mos. later; 8 pts remained unchanged for 2 year.
II	(19)	4 pts: positive	Metastases, equivalent to Stage IV	All died, at 5, 8, 12 and 24 mos. respectively.
		8 pts: suspicious	–	2 pts – IV on clinical evidence both died, at 4 and 14 mos.; 1 pt without change in equivalent stage of disease died at 28 mos.
		7 pts: negative	–	One pt became equivalent to Stage III clinically and died at 11 mos.; 3 pts – IV, dying at 4 and 10 mos.; one pt alive with active disease at 22 mos.
III	(12)	7 pts: positive	Metastases, equivalent to IV	6 pts died, all within 6 mos. of lymphography; one pt alive 15 mos. later.
		3 pts: suspicious	–	All became equivalent, to Stage IV clinically; all died, one at 3 mos., 2 at 1 year.
		2 pts: negative	–	One – IV on repeat lymphogram and died at 17 mos.; the other unchanged at 24 mos.
IV	(3)	2 pts: positive	–	Both died, at 8 and 29 mos. respectively.
			–	
		1 pt: suspicious	–	Alive 17 mos. later.
Unknown (2) (when diagnosis made 1946-8; records incomplete)		(Negative)	–	Both alive without evidence of active disease at 22 and 27 mos.

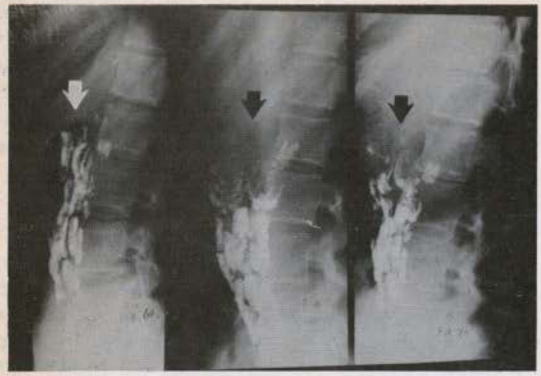

FIGURE 1(a) (b) (c)

18 year-old female with stage II Hodgkin's disease on clinical examination. Fig. 1(a) shows suspicious changes in the upper lumbar para-aortic region. In adequate radiation therapy given to the para-aortic region as she was two months pregnant at the time. Fig. 1(b), seven months later, soon after delivery, shows positive lymphogram with gross enlargement, filling defects and partial obstruction in upper lumbar para-aortic lymph nodes. Fig. 1(c), three months later; shows improvement from local radiation therapy. The disease became active again and the patient died at 16 months from the time of diagnosis.

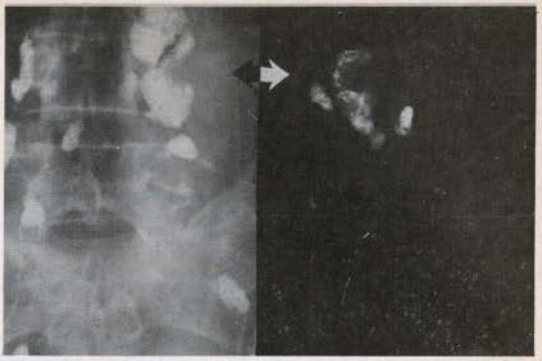

FIGURE 3

35 year-old female with stage II carcinoma of the cervix. The lymphogram shows filling defects characteristic of metastatic carcinoma in the left para-aortic lymph node, level L 4, indicating disease beyond the pelvic cavity. Laparotomy was performed; lymph nodes excised from the region (see inset) were radiographed prior to microscopic section. Histology showed metastatic carcinoma of the cervix (see arrows). At this time there was no clinical suspicion of disease beyond the pelvic cavity.

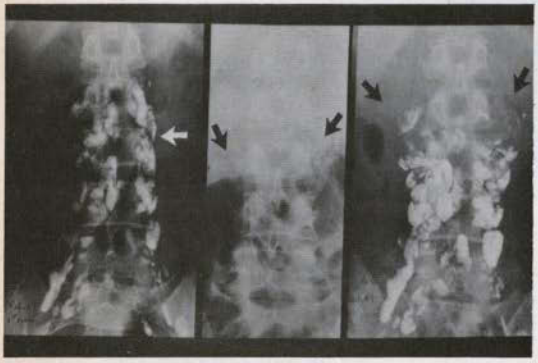

FIGURE 2(a) (b) (c)

These illustrations show the value of lymphography in surveillance, since opaque medium remains in lymph nodes for several months. Same patient as illustrated in fig. 1(a) (b) (c). At the original lymphogram, fig. 2(a), suspicious changes noted in the upper lumbar para-aortic lymph nodes; seven months later a plain film shows the faint residual contrast medium in these nodes which are now enlarged, with distortion of internal architecture and displacement from their previous normal location; fig. 2(c) shows the repeat lymphogram ("second look") confirming the extent of the changes.

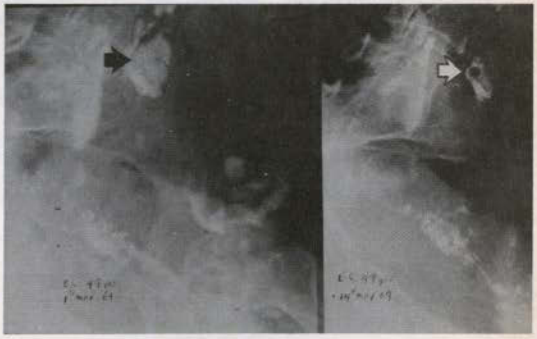

FIGURE 4(a) and (b)

Illustrates value of follow-up radiographs in surveillance of metastases. A 49 year-old female with stage III carcinoma of the cervix on clinical evidence; left hypogastric and common iliac lymph nodes are well opacified in Fig. 4(a), and show no metastasis; two months later following radiation treatment to the pelvis, these nodes are somewhat smaller but there is now a spherical "bull's eye" metastasis evident; growing metastases are also evident in the external iliac lymph nodes just above the left hip joint. Radiation therapy could thus be appropriately directed.

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evidence of disease in detail when it occurs. Here, we have referred to new evidence of disease as "equivalent to the appropriate stage"; we realize that we are making a slight deviation from convention, but we believe that it may be justified in this presentation.

Stage 0: *In situ* also known as pre-invasive carcinoma or intra-epithelial carcinoma;

Stage I: The carcinoma is strictly confined to the cervix;

Stage II: The carcinoma extends beyond the cervix but has not reached the pelvic wall; it may also involve the vagina but not the lower third;

Stage III: The carcinoma has reached the pelvic wall (on rectal examination there is no "cancer free" space between the tumour and the pelvic wall); carcinoma may also involve the lower third of the vagina;

Stage IV: The carcinoma involves the bladder or rectum or both, or has extended beyond the limits described above.

CLINICAL MATERIAL 50 patients with carcinoma of the cervix, all of whom had lymphography, comprised this portion of the study. Table 2 summarized the details.

From the above detail, the lymphogram provided new information which can be summarized as follows:

– 12 patients (24%): lymphogram positive, which was *unsuspected* on clinical grounds;

– 13 patients (26%): suspicious changes on the lymphogram; six of these died within 28 months;

– 23 patients (46%): a negative lymphogram initially; one of these had a repeat lymphogram eight months later which was then positive; this patient died nine months after the positive lymphogram. Four of the remainder died within 28 months, without repeat lymphography.

Conclusions

Lymphography, performed in 28 patients with proven Hodgkin's disease and in 50 patients with proven carcinoma of the cervix uteri, gave additional information *which would not have been obtained by any other means short of laparotomy*.

In Hodgkin's disease, lymphographic evidence revealed more extensive disease than that suspected clinically in 11 patients (39.3%) and thus altered the staging of the disease; in 4 patients (14.3%) their staging was unaltered but the lymphogram showed suspicious changes; in 13 patients (46.4%) the staging was unaltered, the lymphogram being negative.

In carcinoma of the cervix, the lymphogram revealed evidence of unsuspected disease in 12 patients (24%) on the initial lymphogram; subsequently the opacified lymph nodes on plain radiography or on repeat lymphogram showed new evidence of metastases in one additional patient (2%). Suspicious changes were present on the lymphogram in 13 patients (26%); 6 of these died within 28 months. Negative lymphograms occurred in 23 patients (46%).

From this study, it is apparent that lymphography is of value in the initial assessment of any patient with Hodgkin's disease or carcinoma of the cervix, *since unsuspected disease may be revealed.* As the contrast medium remains in the lymph nodes for several months, plain radiographs of the pelvis and lumbar spine afford a simple, practical means of surveillance. A repeat lymphogram or "second look" can be performed at any time when the original opaque medium becomes too faint for accurate assessment. □

ACKNOWLEDGEMENTS

Our thanks are due to the excellent help and co-operation from the staff of Medical Records and the Tumour Clinic at the Victoria General Hospital, without which this study would not have been possible; also the staff of the Medical Records at the Halifax Infirmary for follow-up information on one patient; to the staff of the Medical Records of the Izaak Walton Killam Hospital for Children for follow-up information on one patient; to the staff of the Department of Medical Photography I.W.K. Hospital for Children for the illustrations; to Mrs. Jeanette Jardine for secretarial help with the early part of this work and to Miss Grace Fisher for secretarial help with the latter part of this work; also for financial support to one author (T.Y.Y.) from the Canadian Cancer Society, Nova Scotia Division and the Faculty of Medicine Dalhousie University.

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PANAMERICAN CONFERENCE TO MEET

The Fourth Panamerican Conference on Medical Education will be held in Toronto, Ontario, Canada, on August 28-30, 1972. The conference will be sponsored by the Association of Canadian Medical Colleges in conjunction with the Panamerican Federation of Associations of Medical Schools and will be organized by the University of Toronto.

The Conference theme is "The Role of Education Research in Decision-Making in Medical Education". Besides keynote speeches on this topic, the four subtopics following will be explored in depth: Assessment of Student Performance; Curriculum Evaluation; Research and Development in the Educational Process; and Longitudinal Research, its Objectives and its Applications.

Further information may be obtained from:

Miss N. Wintrob
Conference Secretariat
Medical Sciences Building
University of Toronto
TORONTO 181, Ontario

Dr. Garnett W. Turner

President 1971-1972

MEDICAL SOCIETY OF NOVA SCOTIA

A native of Chester Basin, Lunenburg County, Dr. Turner has been in general practice in Windsor, Hants County, for over 30 years. A medical graduate of Dalhousie University, Halifax, he has served as President of the Medical Health Officers Association of Nova Scotia; as a director and member of the executive of the Society-initiated health care insurance plan under Maritime Medical Care Inc.

Dr. Turner served his residency at the Victoria General Hospital, Halifax, and during World War II was medical officer at the Elementary Flying School, Stanley, N.S. He is Chief of Staff at the Payzant Memorial Hospital in Windsor and a member of the Valley Medical Society of Nova Scotia as well as past Vice Chairman of the provincial body's executive.

Married to the former Frances Comstock, he has three children: Sandra, Diane and Charles. His open-ended approach to relaxation includes curling, hunting, fishing, playing the saxaphone and an abiding interest in navigation which he puts to use on his own power cruiser. He and his family also enjoy the companionship of "Nugget", an Irish-born Poodle. □

What is "Medical Audit..?

A medical audit programme is a system of continuing medical education using medical records to evaluate the quality of medical care being rendered. It is possible to audit office records, but the simplest place to begin a medical audit is in a hospital which has a medical records abstracting service such as MAP-PAS or HMRI.

Step one in a medical audit is deciding what the standards of care should be. This is probably the most important part of the whole programme. It requires homework on the part of the individual or committee in preparing the recommendations for diagnostic and therapeutic standards. But it also requires that all members of the medical staff agree that these are the desired standards to ensure excellence in patient care. Most of the educational benefit from a medical audit programme is derived from the study, discussion, and debate which takes place in setting standards for the audit. Any group which requests prefabricated standards from another institution has missed the whole point.

Step two is matching the care given against the standards. This is relatively easy where medical record abstracts are available and much of the task can be done by a medical records librarian who has taken a special interest in techniques of medical audit. Training programmes for members of the medical staff and medical records librarians in medical audit are offered several times each year throughout the nation and we hope to have one in Nova Scotia during 1972. Where there are discrepancies between the agreed upon standards and the actual patient care being given, educational programmes can be arranged to update the staff. An important aspect of medical audit is the follow-up study done, perhaps one year later, to see if deficits have been made up.

Your medical staff has agreed to conduct a medical audit programme and the first topic chosen is pneumonia. A committee has recommended standards for diagnosis and therapy and after considerable debate the medical staff accepted the standards with some modification. The medical records librarian has conducted the preliminary search for these items and, with the committee, prepared a report showing less than 60% of all charts studied have met the minimum diagnostic standards.

All members of the staff have participated in setting the standards. All members know the level of performance. Not much more need be said. □

— Paul Cudmore, M.D.

It is with narrow-souled people as with narrow-necked bottles — the less they have in them the more noise they make in pouring it out.

— Health Rays

Personal Interest Notes

Readers of The Nova Scotia Medical Bulletin will be interested to learn that **Dr. D. A. E. Shephard**, their Editor-in-Chief, has moved from Nova Scotia to take up residence in Rochester, Minn. He will be with the Department of Biomedical Communications at the Mayo Foundation in Rochester. Dr. Shephard's contribution to the success of the Bulletin during the past two years has been greatly appreciated by all Members of the Medical Society. We extend every good wish to him in his new career.

Our thanks and best wishes to **Dr. A. J. Buhr** of Halifax who has accepted the post of Editor-in-Chief for the coming term.

Congratulations are extended to **Dr. Peter C. Gordon** on his appointment to The Board of Directors of The Halifax Herald and The Halifax Mail Star.

Dr. W. C. Nicholas who has been with the Department of Medicine at the Halifax Infirmary, has accepted a post with the Department of Medicine at the School of Medicine McMaster University. He and his family moved in December, to Dundas, Ontario. Dr. Nicholas started his new position in January.

The **Dr. J. Earle Hiltz Medical Education Award.** At the last annual meeting of the Nova Scotia Tuberculosis and Respiratory Disease Association it was announced that a medical education award had been established in honour of the late Dr. J. Earle Hiltz, Medical Superintendent of the Nova Scotia Sanatorium until his death in March, 1969. The recipient of the award is to be known as "The Hiltz Scholar".

The Florence Emory Award was received by the Nova Scotia Division of the Red Cross for the second time. This is a National Award given in recognition of continued achievement for nursing in the field of family health. This is the second time Nova Scotia has received the Award in the five years it has been in existence. Last year over 2,800 people took the Red Cross Care in the Home Course. More people here took the Course in 1970 than in any other Division in Canada.

OBITUARIES

Dr. Arthur James Ross Brady, 64, of Bridgetown, died October 23, 1971. He graduated from the University of Edinburgh School of Medicine in 1931. He practised 20 years in Birmingham, England, and came to Halifax in 1952 where he practised until 1967. His last practice was in Bridgetown. Our sympathy is extended to his wife.

Dr. Duncan A. Campbell, 46, of Bridgewater, died January 7, 1972. Born in Bridgewater, he was a son of Mrs. F. H. Dickinson and the late Dr. D. Campbell. He was a graduate of Dalhousie Medical School, Class of 1950. To his wife and family we extend our deepest sympathy.

Dr. Manubhui T. Danak, 53, of Sydney Mines, died September 15, 1971. Born and educated in India he practised medicine in Sydney Mines for the past 10 years. Our sympathy is extended to his family.

Dr. Waldo E. Hirtle, 55, of Sackville, N.B. died November 2, 1971. Dr. Hirtle was born in Dartmouth and graduated from Dalhousie Medical School in 1944. He practised in Sackville for 24 years and was a member of both the New Brunswick and Nova Scotia Medical Societies. Our deepest sympathy is extended to his wife and family.

Dr. Prabha S. Nigan, 36, of Halifax, died December 16, 1971. Dr. Nigan was born and educated in India. He had practised medicine in Nova Scotia since 1963. Deepest sympathy is extended to his wife and family. □

NEW MEMBERS

The Physicians listed below have joined The Medical Society of Nova Scotia between September 1, 1971 and December 31, 1971. A most cordial welcome is extended from the Society.

Dr. Wm. C. Acker	Halifax, N.S.	Dr. Carlos Medina	Halifax, N.S.
Dr. C. M. Childs	Bedford, N.S.	Dr. E. Arlene Merchant	Halifax, N.S.
Dr. J. R. Dill	Halifax, N.S.	Dr. G. A. Mertens	Antigonish, N.S.
Dr. Wm. G. Dixon	Bridgewater, N.S.	Dr. H. S. Morton	Lunenburg, N.S.
Dr. G. D. Douglas	Halifax, N.S.	Dr. D. G. Macdonald	Halifax Co., N.S.
Dr. L. A. Fried	Halifax, N.S.	Dr. T. J. MacKay	Dartmouth, N.S.
Dr. P. P. George	Kentville, N.S.	Dr. Zitamaria Pinto	Halifax, N.S.
Dr. B. S. Ignacio	Sydney Mines, N.S.	Dr. M. P. Shannon	Halifax, N.S.
Dr. E. T. Kent	Lunenburg, N.S.	Dr. Wm. D. Stanish	Halifax, N.S.
Dr. D. B. King	Halifax, N.S.	Dr. W. A. P. Thompson	Halifax, N.S.
Dr. Annie E. Law	Halifax, N.S.	Dr. A. D. Trenholm	Halifax, N.S.
Dr. F. A. J. Mathews	Halifax, N.S.	Dr. A. C. Watson	Mahone Bay, N.S.

PNEUMATIC CURE FOR BALDNESS

There has recently been advertised a pneumatic cure for baldness. This is based on the old, old theory that the loss of hair is caused by a diminished blood supply, with resulting atrophy of the hair bulbs. Positively the last thing in the treatment of this affection is what is known as a "capillary chalice". We trust that our denominational friends will not be shocked at this use of the word, but will take the broader view that is derived from the Latin *calix*, meaning a cup, and that it is only within the last dozen centuries that the word has been specifically used to designate the Communion Cup. Besides, to what more noble purpose could an instrument with any name be applied than in the relief of baldness, the deformity of youth, and scarcely to be borne with equanimity in old age? The mechanism of this treatment is simply the old one of cupping. The chalice is nothing but a hollow rubber pad from which the air can be exhausted, and in this way the circulation of the scalp stimulated so as to produce healthy hair follicles and stimulate the normal growth of the hair. We are left in no doubt as to the efficacy of the treatment, for the advertisement of the company selling the instrument contains a number of illustrations of "before" and "after" treatment. A number of men are shown with remarkably smooth pates, and later we see heads covered with hair that would be the envy of any barber in the land. We are informed that the "chalice" does not aim to produce a perfect vacuum, which of course, nature abhors, but that it is only a partial one. We are gratified at this conservatism on the part of the makers of the cup, because a perfect vacuum might result in the loss of a portion of the scalp, and there would be little hope of restoration, as even with this method of stimulating the circulation it could hardly be hoped that the denuded cranium could produce a luxuriant growth of hair.

— Canada Lancet, **32**: 152, 1899. □

DR. J. EARLE HILTZ MEDICAL EDUCATION AWARD

One thousand dollars yearly is being made available by the Nova Scotia TB and RD Association, to aid third-year students who are coming to the end of their academic year, to further their studies of the respiratory system.

Further information may be obtained from Mr. Ralph E. J. Ricketts, Executive Secretary, Nova Scotia Tuberculosis and Respiratory Disease Association, 17 Alma Crescent, Halifax, phone 454-7336. Closing date for applications: 15th April, 1972.

Criteria

1. The applicant must be a third-year student of the Dalhousie Faculty of Medicine.

(a) Award is to support elective in study of respiratory system during fourth year.

2. Only students with a definite interest in respiratory-system studies should apply.

3. Presentation of a satisfactory elective in respiratory-system studies.

4. This elective must be done at a location satisfactory to the committee (Dalhousie University or elsewhere).

5. This elective must fulfill the guidelines for electives as approved by the Faculty of Medicine.

6. Previous academic record in respiratory-system studies will be given consideration.

7. The medical-education representative of the class of the involved year may be requested to act in an advisory capacity to the selection committee.

8. This is a yearly Award presented at the Annual Meeting of the Nova Scotia Tuberculosis and Respiratory Disease Association held in the first week of May in any given year. □