The NOVA SCOTIA MEDICAL BULLETIN

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Editorial

WELCOME

On several occasions in the past, certain hospital staffs throughout Nova Scotia have undertaken in turn to provide an issue of the Nova Scotia Medical Bulletin. They have enjoyed a gratifying sense of achievement to recompense for a difficult job well done, while their confrères in other areas of the Province have been properly impressed by the wealth of interesting and informative clinical material thus revealed.

This month a new University teaching hospital performs this function with several valuable contributions from departmental chairman, attending staff members, and resident staff. We hope this will stimulate contributions from the staffs of other community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, to demonstrate the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals throughout Nova Scotia, the staffs of the community hospitals thro

strate also the potential of the so-called "Non teaching hospital".

Dr. F. J. Barton's article is deserving of careful study by any group considering interne training. His emphasis upon the staff responsibilities in teaching graduate doctors from all over the world, is most timely. There is no better way of bringing the advantages of Western medicine (and culture) to our rapidly developing new nations than by training their young doctors in the clinical setting of a good community hospital.

Dr. Harris Miller's article indicating the plans of the Infirmary to fit the family doctor into a position of responsibility where he will "both give and receive in the hospital teaching programme" includes one paragraph which points out an important principle for better hospital care in the future: - "physicians participating in this Department will be accepted as Courtesy Staff of the Hospital and shall have privileges in the clinical services of the other Departments in accord with their experience and training, on recommendation of the Credentials Committee". For too long there has been a tendency among hospital credential committees, to hide behind the requirements of remote accrediting bodies, to this extent blindly denying or granting privileges. It is to be hoped that the action of the Infirmary will introduce an era where the Credentials Committee considers every staff appointment on the basis of that doctor's potential, and each annual reappointment only on the basis of his performance in the hospital against standards designed specifically to achieve the highest possible quality of patient care available in their own hospital.

The Medical Society of Nova Scotia salutes the staff of the Halifax Infirmary, its Administrators and its Board, upon the assumption of their new

role as a community teaching hospital.

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Halifax Infirmary - 1963

With the official opening of the new 480-bed Halifax Infirmary, a new life was begun as a departmentalized teaching hospital. One year before, in May, 1961, a document of agreement between Dalhousie and the Infirmary formalized the University affiliation.

REQUIREMENTS OF THE COMMUNITY TEACHING HOSPITAL

When a Community General Hospital assumes the new obligations devolving upon a University-affiliated teaching hospital, it is entering a much larger medical sphere and a great deal more is expected. The Medical Staff Organization must meet additional requirements that are designed to provide a teaching hospital atmosphere and insure a continuing education program at all Medical Staff levels. This means that in the geographical teaching areas there must be daily teaching rounds, weekly grand rounds, monthly department meetings, designed to review critically the work of the department. In addition, there are teaching obligations to groups of undergraduates as assigned from time to time. These and many other functions are administered by multiple committees of Staff, all designed to provide quality medical care, which is the magic phrase governing all accredited teaching hospitals.

Thus the demands on an Active Staff member of a teaching hospital are substantial and ever-increasing. The accreditation inspectors insist on documented evidence of every staff activity - weekly rounds, monthly department meetings, committee minutes, etc., etc., so that written proof of such proceed-

ings amount to thousands of words monthly.

THE PROBLEMS:

Two problems arise - finding adequate staff and the provision of teaching material. Adequate staff, of course, means Attending Staff and Intern-Resident Staff.

The ever-increasing demands on the Attending Staff member of a teaching hospital, with sometimes intangible returns, makes recruitment of adequate qualified people more and more difficult. When choosing an area of practice, many doctors find the non-University centres more attractive and less demanding of their time.

The greater problem, however, is the Intern-Resident staff. Provincial hospitals have always looked to Dalhousie and the final year medical students to meet the intern requirements. While the number of fifth year students has not increased appreciably over the years, the increased number of hospital beds and more rapid turnover in hospitals has virtually doubled, and in some areas trebled the demand for intern services. The intern shortage is now being met by drawing on the world market and employing Foreign Medical Graduates. It is a buyers' market for eligible interns and residents, since they can pick and choose from a large variety of approved teaching hospitals in Canada and the United States. Only 15% of hospitals in the United States, for instance, have a qualified intern staff.

Traditionally, teaching material has been found on public wards and outpatient departments of general hospitals, where indigents were given good care in return for allowing "young doctors" to look after them. This is a thing of the past. Our affluent and ever-increasing socialistic society has all but eliminated medical indigents. So now, as teaching must go on, we find that private patients must also be teaching patients. Other areas of Canada and the United States have met this problem some time ago - now we in Nova Scotia must make our hospital teaching program so dignified and positive in its approach and coupled with such high quality medical care, that a teaching patient may feel privileged rather than stigmatized.

THE GENERAL PRACTITIONER IN THE TEACHING HOSPITAL

There has been no little uneasiness in the General Practitioner ranks in recent years, born of the fear that increasing restriction of hospital privileges would eventually lead to virtual exclusion. What is really happening, however, is that under the heading of improved patient care, all disciplines within the profession are undergoing considerable restriction of freedom by the standards of a generation ago. The general surgeon of a decade or two ago now finds that he is surrendering this procedure and that procedure to the specialty groups. A pediatrician who puts on a plaster cast or does a circumcision, is very apt to be looking over his shoulder to see if one of his confrères is going to accuse him of stepping out of line. The anaesthetist who used to do some general practice in conjunction with his anaesthetic practice, now finds that he must limit himself to his specialty, if he is to be recognized - and so on. The family doctor still has a relatively wide range of privileges over a diversified field.

In the past, general practitioners have played little part in hospital teaching programs. This situation is now being rectified. Medical schools are conscious of the need for turning out general-practitioner-oriented graduates rather than young doctors too specialist-minded, and are beginning to integrate General Practitioners into the teaching program at the preceptorship level so as to place general practice and general practitioners in the proper perspective in the teaching program. Along with this, and certainly in Canada, on the initiative of the College of General Practice, Departments of General Practice are springing up in many centres and are making a real contribution. From the very beginning of its new medical staff organization, the Infirmary has kept the concept of a Department of General Practice in the forefront and is just at the point of announcing the formation of such a department. A general practitioner has already been appointed to chair this activity and to set the necessary machinery in motion for its full implementation. This has been done in collaboration with the Halifax Branch of the College of General Practice.

WHAT OF THE FUTURE?

Anyone who stops to note the marked changes that are taking place before our very eyes and observes the trend, will probably agree to the following forecast:

1. Teaching hospitals, hoping to recruit adequate, qualified teaching clinicians, will have to employ additional attractions in order to compensate for the increasing demands on the clinicians' time.

 We must get used to an international flavor on our house staffs, because for years to come, our Canadian Medical Schools cannot hope to meet the increasing requirements of teaching hospitals and community general hospitals.

- Teaching material of the future will be found in accredited teaching hospitals, without reference to indigency or any connotation of economic status.
- 4. Allied to house staff shortage will be the employment of new devices and categories to execute what have been traditionally intern duties. Nursing Assistants are answering the problem of shortage of Registered Nurses. Likewise, trained technicians may some day (like the versatile Army orderly of war time), be passing Levine tubes, starting I.V.'s, putting on and removing plaster casts, etc.

5. Departments of General Practice will have a real place in Community Teaching Hospitals and there awaits a new, fresh role for the family doctor on the Attending Hospital Staff, who is prepared to give as well as to receive in the teaching hospital program.

It looks like an interesting and challenging time ahead. The strong forces at work, producing these changes in hospital and medical practice, are the result of increasing demands which have come with increasing knowledge. It would seem that our best course is to keep intelligently abreast of these developments and try and mould them by informed direction and leadership.

F. J. BARTON, M.D., F.A.C.S., Chief of Medical Staff.

FROM THE BULLETIN OF 40 YEARS AGO

From the Medical Society of Nova Scotia Bulletin, October 1923

Further progress, based on increasing knowledge of normal and pathological physiology, and on improved operative technique will continue to be made in all existing branches of our science. The surgery of the thoracic viscera is but in its infancy, and we may confidently expect to see the removal of portions or the whole of a diseased lung with a mortality much less than the now prevailing one of about 50 percent. Certain valvular lesions of the heart, especially mitral and aortic stenosis will be attacked and the constricted opening enlarged successfully: - occasionally a brilliant removal of a cardiac or pulmonary embolus will be done. Cancer of the esophagus will cease to present the almost hopeless problem which confronts us to-day. The abdomen is a field which appears to be pretty well tilled, although progress may be made in connection with a better understanding of the physiology of the spleen and adrenals, and possibly also of the pancreas and liver. In the vascular system, embolectomy and the restoring of impaired circulation will be developed. In the central nervous system, the astounding progress made in recent years promises further advances, among the most needed of which is the relief of hydrocephalus. The best surgical work on the brain and spinal cord is now necessarily concentrated in the hands of a few brilliant men, but a younger generation of neurological surgeons is being trained, and the coming years will show a vast increase in the benefit to suffering humanity in this field.

From the address by Dr. David Cheever, Associate Professor of Surgery in Harvard University to The Medical Society of Nova Scotia, July 4, 1923.

The Psychiatric Service at the Halifax Infirmary

F. A. Dunsworth, M.D., C.M., F.A.P.A.

Associate Professor of Psychiatry Dalhousie University

"Mental illness should be dealt with in precisely the same organizational,

administrative and professional framework as physical illness."

It is in the context of the above theme from "More For the Mind", a Study of Psychiatric Services in Canada, published by the Canadian Mental Health Association just this year, that the Psychiatric Service recently established at the Halifax Infirmary functions. I would advise anyone interested to read the original book - it is an excellent and readable manuscript. Extracted from it and applied to our own Unit, our aims may be simply stated as the comprehensive evaluation and early treatment in an "open" general hospital service of psychiatrically disturbed persons.

The ramifications of our theme raise many challenges, only a few of which can be outlined in the space available, but we feel the approaches we are taking may be applicable to other branches of Medicine. In any case, we welcome this opportunity to outline some of our recent thinking in the field of general

hospital psychiatry.

At the risk of over-simplifying our approach, it may be summarized as follows:—No illness occurs in a vacuum. The environment may contribute to the genesis of the illness, or perhaps the illness effects the environment - in any case a careful evaluation of the interaction of the patient and the environment should rank high in scientific inquiry.

Just as a sick environment may react adversely on the patient's illness, a health milieu may react in a positive manner. All treatment must, therefore, be directed at eradication of sick influences and the encouragement and ex-

ample of healthy thinking and functioning.

With these introductory remarks, we will attempt to describe the philo-

sophy of our service.

We may approach our objective of early treatment of suitable patients by considering the following: -

1. The selection of suitable patients.

The organization and therapeutic orientation of the treatment team.

3. The interaction with other hospital departments and services.

The continuity of therapeutic services.

It is the latter point which first warrants attention. Hospitalization in our thinking is but one chapter in the story of the patient's illness. As such, hospitalization must be integrated with the patient's life and therapy of his difficulties before admission and be integrated with the course of his illness after discharge.

It is this approach that makes our task so difficult. Administratively, an in-patient psychiatric facility needs coordination with the family physician, numerous diverse agencies, outpatient and emergency services, not to mention the tremendous responsibility in the field of social work and even welfare, for

the patient and his family. Such demands tend to multiply rapidly and their solution does not seem in sight.

The selection of suitable patients fortunately is easier. Since our orientation is therapy, we must select for treatment those patients whose illness is of relatively recent origin, of a type that generally responds to a relatively brief time in hospital and the patient himself must be of sufficient mental health to be willing to co-operate with the treatment available and the necessary limitations that must be imposed.

We have an open ward - that is, there are no locked doors. Except for the procedures that may be used by physicians generally in cases of emergency, we

cannot legally restrict our patients for any protracted periods.

Thus, our patients usually are relatively young or, if older, have a disturbance of recent origin, likely to respond to brief therapy. They and their relatives must be willing and able to abide by the ward limitations.

Except for very special circumstances, our patients sign themselves in

and they can, therefore, sign themselves out.

The interesting interplay between Staff Members and Staff and patients has been reported in many articles, but to be involved in observing and reacting in the interplays is much more fascinating. We feel strongly that the unit of therapy is the team. This is made up of the Chief of Service, the Staff Physician, the Resident Physician, the Intern, the Social Worker, the Psychologist, the Nurse and the Nurses' Aides.

This sounds like an overwhelming number, but a little reflection reveals that actually the therapeutic team could easily be considered the total hospital staff and embrace everyone from the admitting clerk, the Commissionaire at the front desk, the cleaning staff, the dietetics staff and all administrative personnel. One must never forget behind the scenes - the skilled professions in the laboratories and the highly trained personnel that keep the complex structure that is a modern hospital functioning.

The nucleus of the team is made up of those with closest contact with the patient. We attempt to orient our patients and their relatives on admission to our basic therapeutic structure and it is by the interaction with this team

that the patient may be helped towards health.

Like any team, there must be a diversity of roles and functions, but the aims must be the same.

These objectives can only be accomplished by a great amount of formal and informal communication. In Psychiatry we are notorious for conferences and meetings, but we feel that without them we would fragment in our approach and the patient would suffer. As previously stated, behind any team must be a unity of purpose, but especially there must be a mutual trust. We attempt to honestly assess our individual reactions to our patients and especially to each other. This does not mean all slavishly follow just one method of behavior or one avenue of thought, since individuality in approach stimulates the whole group, but individuality must always be kept within the context of mutual co-operation.

Situated as we are within the hospital structure, both administratively and geographically, we feel we can give and receive much from the Hospital itself. We feel we can give an orientation to patient care, which is valuable, and from the Hospital we are constantly reminded of the broad scope of Medicine and thus we can avoid the restriction of practice and isolation which has been the bane of Psychiatry in the past. It is now well recognized that separ-

ate facilities can never be equal.

In summary, then, we feel Psychiatry must be an integral part of Medicine as well as being of the highest possible specialty calibre. We are fortunate that our training program is coordinated with the comprehensive and renowned training program in the Department of Psychiatry of Dalhousie University.

At a later date, we hope to report our impressions of our ward milieu therapy, our group psychotherapy, both in-patient and out-patient, and other interesting departures we have taken in Psychiatric therapy, but for the present we have touched lightly on our basic philosophy as Psychiatry's contribution to the total care of our patients.

Radiotherapy Department

W. Constable, M.B., ChB., D.M.R.T.

During the past few months, plans have been under way to increase the radiotherapy facilities available at the Infirmary. The department was established some thirty years ago by Doctor C. M. Jones and continued under his direction (except for the period of his military service in Europe during the Second World War) until four months ago. With the increasing complexities of the two radiological disciplines and the greatly enhanced volume of work, Doctor Jones advised separation of the two services.

The main lines of expansion being undertaken at the moment are in the radium and radioisotope fields. Plans are advanced for providing the necessary facilities for the treatment of gynecological cancer by radium and the

New Year is foreseen as the date when this work will be completed.

The bulk of the department's work during the past four months has been geared to establishing the radioisotope section. This service came into operation in October and thyroid function studies (radioiodine "uptake" tests) and various hematological investigations are performed routinely. All other routine diagnostic and therapeutic procedures involving radioisotopes, will be available within the next month or so.

The department is very pleased to have acquired the services of Mr. C. T. G. Pomroy as physicist and already the demands on his time from other specalities indicate the value of a hospital physicist in present day medicine. The increasing use of computers in medicine (a particular interest of Mr.

Pomroy) will underline this requirement even more.

The General Practitioner in the Halifax Infirmary

J. E. H. MILLER, M.D.

Head, Department of General Practice

Recently, there has been considerable thought given to the formation of a Department of General Practice in the teaching hospitals in Halifax. The Halifax Infirmary, in co-operation with the College of General Practice, is taking the necessary steps to obtain the service of the family doctor on the Attending Hospital Staff, one who will both give and receive in the hospital teaching program.

In institutions where the G.P. is considered a full-fledged member of the Medical Staff and where he is allowed full privileges according to his ability, there is no need for departmentalization. In those hospitals where his status is inadequate or where this status is in danger of being further threatened or restricted, such a Department is a "must" so that it can speak and act for the G.P. in an authoritative manner.

In the Halifax Infirmary, the Department of General Practice shall not have a clinical in-patient service and no patients shall be admitted to the Department.

Physicians participating in this Department will be accepted as Courtesy Staff of the Hospital and shall have privileges in the clinical services of the other departments in accord with their experience and training, on recommendation of the Credentials Committee. In any service in which a general practitioner shall have privileges, he shall be subject to the rules of that service and subject to the authority of the chief of the service involved.

The Chief of the General Practice Department shall be a member of the Medical Advisory Committee and, along with other members of the Department elected to Active Staff, shall be eligible for membership in all standing and special committees of the Medical Staff.

The establishment of a Department of General Practice in the Halifax Infirmary is a recognition by the Hospital Staff of the relationship of the general practitioner to his neighborhood hospital, which is a most important one, in that a doctor cannot adequately practice modern medicine without hospital facilities and the opportunity for professional association with his confrères.

The aims of the Department are those enunciated by the College, e.g., "to provide for the general physician (1) fair and equitable representation in all Staff activities of the Hospital, (2) staff privileges to treat his patients within his competence and so improve the medical care of the patient, (3) the opportunity to participate in a continuous educational program".

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Serous Otitis Media

A. G. SHANE, M.D., F.A.A.O.O.

Head, Department of Ophthalmology & Otolaryngology

This disease is commonly defined as fluid in the middle ear cleft. There is no doubt that it is becoming more frequent or more commonly diagnosed, and also that it is becoming more of a problem in Medicine, particularly to the practising otologist. To attest to this fact, the last two issues of **The Journal of Laryngology and Otology** contained major articles relating to this subject. The recent First British Conference in Otolaryngology, held in London the past June, gave part of a major session to this subject.

Etiology

The cause of this condition is mainly due to the Eustachian tube not opening during the act of swallowing. This main ventilating shaft is blocked in most, but not in all, cases. The air in the middle ear eleft contains nitrogen and oxygen. On blockage, this air is absorbed or partially so, causing a vacuum to form, with outpouring of fluid into the middle ear from its lining mucous membrane. On other occasions, thick gelatinous fluid is found in the middle ear in which the tube is patent. The Eustachian opening may be blocked mechanically by hypertrophied adenoids, neoplasms of the nasopharynx, whether malignant or benign. This fluid may be formed during a descent from a high altitude, coming on acutely, and is known by the name of barotrauma. It is found in acute upper respiratory infections, influenza and allergies. For some cases, no cause can be found.

I think that abortive or incomplete treatment of acute otitis media, in which antibiotics are given for 2-3 days, with a tympanic membrane returning to normal, are one of the largest group causes. Antibiotics should be given until the tympanic membrane is normal, even if it takes a full week or more of continuous treatment.

The effusion is variable. At first, it may be only lightly straw colored or watery, later becoming much thicker, brownish in color, and lastly, thick, gelatinous and very elastic, giving rise to the term "glue ear". No organisms can be grown from this sterile fluid, which may be a sterile transudate or exudate. One may conjecture that the fluid content may be removed by absorption or that thick mucous elements are added to this thin fluid causing it to become thicker. The mucous membrane of the middle ear is found to be thicker and more velvety in appearance, but not injected, and therefore not suggesting an active inflammatory process.

SYMPTOMATOLOGY

The symptoms are those of a painless conduction deafness, with a sense of roaring and fullness in the ears. The patient tells you his voice sounds loud in his head, or that one ear sounds different than the other. Some patients may complain of mild dizziness and that they hear better when the head position is changed. Tinnitus is not common.

The signs are those of a conductive deafness, i.e. air conduction is diminished 35-60 decibels, bone conduction is relatively increased and Weber's Test with the tuning forks, refers to the affected ear. Audiograms show both high and low tone losses and are not diagnostic of an indicator pointing consistently to this condition.

The tympanic membrane is not translucent, but waxy in color, retracted, but mobile, even if only to a slight degree. The ear drum has a vellow or darker brown color and may also have a dark blue tinge in contradistinction to the normal translucent membrane.

The fluid in the middle ear may be below the handle of the malleus and assume an almost straight line with a fine curve. If above the handle of the malleus, it shows two fine concave lines, interrupted by the handle of the malleus. This fluid line is mobile and its position can be changed and viewed directly by moving the patient's head. Quite often, air bubbles are seen in the liquid. This may mean that a previously closed tube has now been partially opened. If no bubbles are seen, this will mean that the tube is not patent. X-rays are not conclusive, unless haziness of the mastoid cells are seen.

TREATMENT

The treatment, in some instances, is the prevention of the conditions that allowed the fluid to form. Adequate treatment of all cases of acute otitis media for at least a week on antibiotic therapy or until the tympanic membrane is well within normal limits, is necessary. The child's hearing should return to its previous level. I also think that one or two weeks after this infection has settled, the Eustachian tubes should be inflated to make sure they are patent, and the middle ear cleft viewed directly, to make sure that no fluid has formed.

Serous fluid may drain naturally through the Eustachian tubes and thus cure some cases without medical help. The routine in most cases is tube inflation by the various methods and instillation of a mild nasal vaso-constrictor, e.g. Ephedrine 1% or Gluco-Fedrin 1%, in the low lying lateral position. The use of menthol inhalations such as Vapoline, are comforting. If there is an underlying allergic basis, then antihistamines are in order, followed by a course of desensitization.

The effusion may be removed from the middle ear by needle aspiration through the tympanic membrane. A non-inflamed tympanic membrane does not cause intense pain when needled. The Siegle speculum may be used to help evacuate the contents by negative pressure. It may also be used with positive pressure to force the fluid through the Eustachian tube into the naso-

This method may also be used to open a closed tube.

A myringotomy incision may be utilized to evacuate the middle ear. incision or needle aspiration will heal very rapidly within 24-48 hours. Daily Eustachian inflation or home Valsalva treatment are necessary, until no fluid forms and the patient's hearing is normal. This procedure may need to be performed more than once to remove the fluid. If this fails and adenoids are present, then adenoidectomy and tonsillectomy are indicated. If adenoids have been removed previously, then X-ray and remove adenoid remnants.

If this fluid is very thick and elastic, or repeated needlings have failed, then direct surgical intervention, using the endaural approach and the microscope, is used. The middle ear is opened and examined, the secretions are

removed by suction aspiration.

Some surgeons advocate the use of a polyethylene tube through the tympanic membrane or behind the tympanomeatal flap. With thick viscid fluid, this method will not work well. In final desperation, when the X-rays of the mastoids remain hazy, the surgeon will do a simple mastoidectomy and drain the mastoid, because it is a potential source of fluid production. Lastly, irradiation by X-ray of the Eustachian cushions to make them smaller, will help.

The prognosis is usually good with the thin secretion. This can be aspirated. With the thicker gelatinous type, aspiration does not do as well and more active measures are required. Whether this is the precursor for future otitic problems remains to be seen, but I think more will be written about this subject in the future.

Cervico-Facial Actinomycosis

F. J. BARTON, M.D., F.A.C.S.

J. M. Nugent*

Every practitioner is confronted from time to time with a once-in-a-lifetime clinical entity that offers a special challenge in recognition and diagnosis. In this part of the world, actinomycosis can qualify for rarity, as indicated by the statistical incidence quoted below, and for the misleading clinical picture it may present.

CASE HISTORY!

This 43-year-old lady was admitted to hospital September 3rd, 1963 with an admitting diagnosis of a malignant parotid tumor. The parotid swelling was first noticed and examined on July 16th, 1963 - ten days after her discharge from hospital for a routine cholecystectomy. The impression was that this was an unusual and delayed form of postoperative parotitis. It was treated supportively on that basis and was not seen again until August 20th when the parotid mass was noted to have doubled in size, was uniformly hard, slightly tender, and associated with trismus. She was afebrile and there was no other evidence for an inflammatory basis. X-ray of the underlying bone structure was negative. Patient was taken to the operating room for an exploratory procedure, to at least expose the gland, do a frozen section, and go on from there. The anaesthetist was unable to intubate the patient, due to the fixed trismus that did not relent under general anaesthesia. Not wanting to proceed with a possible prolonged and extensive procedure without intubation, it was decided to settle for a punch biopsy on the possible chance that the result may prove informative. To our great surprise, the pathologist reported "sulphur granules" and the microscopic features suggesting actinomycosis or narcoidosis. Subsequent anaerobic culture confirmed Actinomycosis Bovis.

Patient was placed on Mysteclin F, 1000 mgs. daily as initial therapy, pending review of the literature, before planning long-range therapy. Within a week, marked regression in the inflammatory mass was noted, the oral aperture was doubled in size and the patient felt much more comfortable. She

^{*}Halifax Infirmary Surgical Intern.

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was then discharged on 4,000,000 units of penicillin daily I.M. as an outpatient, which was converted to the oral route two weeks later. At the time of writing, which is one month following the institution of antibiotic therapy, she is symptom-free except for slight residual trismus and very slight residual swelling remains. Our plan is to continue with oral penicillin for at least three months, for reasons that will be discussed below.

She has been referred to the dentist for attention to two careous premolar teeth on the same side as the lesion.

Complete resolution is expected.

REVIEW OF LITERATURE

The most comprehensive and up-to-date review was reported by Spilsbury and Johnstone of Vancouver¹ and forms the basis for the following observations.

INCIDENCE

The Vancouver area survey by Spilsbury and Johnstone over a ten year period prior to 1962, reveals 14 cases of Actinomycosis, of which 7 were in the cervico-facial region.

A survey of the records of the four general hospitals in the Halifax area over a 25 year period, reveals only three cases - 1 cervico-facial and 2 pulmonary.*

PATHOGENESIS:

The etiological agent is Actinomycosis Bovis, which may be normally found in the mouth flora. The portal of entry may be through any devitalized area, such as a careous tooth, following tooth extraction, or acute pharyngitis. Contrary to former belief, this condition is not more common in farmers and has no special predilection for occupational groups and no particular relationship with the chewing of straw or grasses.

DIFFERENTIAL DIAGNOSIS:

The cervico-facial form may run a much milder course than other sites, e.g. chest and abdomen, and the objective findings may lack tenderness, fluctuation and other features of inflammation, so as to make it difficult to distinguish from neoplastic behavior.

In the chest lesions, it must always be considered in the differential with

tuberculosis and carcinoma.

TREATMENT:

Success has been reported with Tetracyline, Chloramphenicol, Streptomycin and Isoniazid. Penicillin, however, remains the drug of choice. In common with all granulomatous lesions, large dosage over a long period is necessary to obtain resolution. In the cervico-facial form, intramuscular Penicillin one to three million units daily or the oral equivalent until well beyond the point when all induration has subsided - is the program of choice. This may well extend into a three month period. (In other forms, e.g., pulmonary, much larger doses are necessary, as high as 10-15 million units daily, during the initial phase of treatment has been found necessary.)

^{*}One of these - treated in the pre-antibiotic days (1938) - expired after a long course of potassium iodide. The other two responded well to antibiotic therapy.

The surgical principle of draining abscess cavities and excision of granulomatous material, may in some cases have to be employed in conjunction with the antibiotic program.

SUMMARY:

A recent case of cervico-facial actinomycosis has been reviewed, stressing the diagnostic points. A brief review of the literature points up the incidence, pathogenesis and treatment.

ACKNOWLEDGEMENTS:

We are indebted to the Medical Records Departments of the Halifax Infirmary, Victoria General Hospital, Camp Hill Hospital and the Children's Hospital for making the necessary survey of the records to provide us with the statistical data of the Halifax area.

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Pus in the Knee-Joint

B. K. COADY, M.D., F.A.C.S.

The danger to life from infection in the knee-joint is greater than in any

other joint, and destruction of the joint is a tragedy.

Fortunately, infection in the knee-joint is a relatively rare happening, but when it does occur, it requires vigorous treatment. Experience in knee-joints does confirm that the joint must have developed relatively great resistance. In well over five hundred arthrotomies which were done as elective procedures, I have never seen a disastrous infection. There have been several in which there was an effusion, in which the joint was hot, in which the patient ran a temperature, but none of these required what might be considered vigorous therapy. They all responded to simple aspiration and the installation of penicillin. It should be noted that this only happened on two or three occasions.

It is the accidental injury and penetration of the joint with tissue damage which predisposes to a severe intra-articular infection. In civilian life, three such cases have been encountered and as automobile accidents are increas-

ing, this is a problem which one might expect to see more frequently.

Basically, a reaction of the joint to infection is an outpouring of plasma, and it would appear that the provision of drainage to permit this process to continue will almost certainly produce a cure.

It has been stated that in the infected joint there are three phases - the hopeful, the doubtful, and the lost. It is suggested that with the usual clinical evaluation of the signs of the infected knee-joint, namely swelling, effusion, local heat and a systemic reaction in the form of a temperature, that the hopeless situation would never be encountered, and the following brief case report illustrates the type of treatment used in two cases of an infected knee-joint, each case eminently successful.

CASE REPORT:

This twenty-five-year-old man was admitted to the Halifax Infirmary on March 4, 1963 and discharged May 17, 1963.

He had been the victim of a freak accident. He was lying in his bunk on board ship the 28th of February, when a huge sea broke the heavy glass of the porthole and showered him with flying pieces of broken glass. He had multiple lacerations, including a gross laceration of his left thigh, but it was the penetrating laceration of the right knee-joint which concerned us most.

All lacerations had had primary suturing on board ship, but when admitted to the hospital, all were infected. He was running a septic temperature

and had a white count of over 21,000 and 87% polymorphs.

His right knee had a recently sutured laceration, was diffusely hot and tender and had an effusion. He was put on large doses of penicillin and strepto-

mycin but his improvement after 24 hours on this was not satisfactory.

On March 6th, under general anaesthesia, his knee was prepared in the usual way and three large needles were inserted, into the joint. It should be stressed that the needles should be large, as there is a great tendency for the fibrin which is produced to cause clogging. It is recommended that needles of the caliber 15 or 14 be used. One should be inserted in the suprapatellar pouch and one or two others inferior to the patella on either side of the ligamentum patellae. As the needles are inserted, particularly the first and second, they should be kept closed with an obturator to facilitate placing of the second and third needles, as it is easier to get a needle into a distended joint than into one in which some of the fluid has ben allowed to escape.

Continuous irrigation was set up, making sure that the fluid went through the superior needle and out through the one or two inferior needles. An I.V. stand was set up and 3,000 or 4,000 cc normal saline, having a million units penicillin in each one thousand, were allowed to flush through the joint each 24 hours. The inferior drainage needles were connected to tubing and drained into bottles at the bedside. It is important that the flow be free. In this case, rearrangement of the needles on March 8th under general anaesthesia

was necessary.

In all, this was kept up for five days, which seems to be satisfactory for a

fairly severe infection.

The needles were removed and an uneventful recovery followed. The patient was given physiotherapy and it appeared both clinically and by X-ray examination that the joint would be normal.

SUMMARY:

A simple method of forced drainage of a knee-joint is described with a case report.

On Diuretic Therapy

S. T. LAUFER, M.D., F.A.C.P.

Head, Department of Medicine

With our increasing knowledge in renal physiology, our diuretic therapy of the patient with cardiac edema has been greatly modified with resulting prolongation of the life of the patient with congestive failure.

In the following, I should like to report briefly on some of our recent experiences in diuretic therapy and particularly to describe that of a new diuretic

still under investigation in our country.

It would be appropriate to start off with a brief review of how recent physiological studies have contributed to a sounder approach in the use of diuretics.

In recent years, the formation of edema has been linked with sodium retention and the reduction of sodium, with concomitant decrease in plasma and interstitial fluid has been recognized as an important factor in the treatment of the congested patient since it alleviates the overload of the heart

associated with increased venous pressure.

Recent physiological studies on the function of the nephron, particularly with regard to the mechanism of sodium re-absorption, suggest that whenever its function is disturbed, sodium re-absorption is enhanced by the intervention of various factors. There is agreement that sodium absorption takes place throughout the whole length of the nephron. At the proximal tubule, sodium is being absorbed directly together with chloride and by hydrogen ion exchange without interfering with potassium excretion. On the other hand, the reabsorptive process at the distal level of the tubule is selective and has an additional mechanism which is of particular interest. Here, beside the active sodium absorption with chloride and the hydrogen ion exchange, potassium from the tubule cells is being exchanged against sodium within the tubular The exchange mechanism is under the influence of adrenal mineralcorticoids, with a consequent increased retention of sodium and excretion of potassium in the presence of excess aldosterone. There is ample evidence that the spirolactones are effective aldosterone antagonists with a predominant distal side of action.

While it is true that many aspects of the problem of congestive heart failure are still unknown, including the mechanism of edema formation, the treatment of the patient with congestive heart failure is quite often effective, more on the basis of clinical experience than on the basis of the application of some of the above-mentioned concepts concerning renal physiology. These concepts of renal physiology may guide the clinician in his application and choice of diuretics or combination of diuretics, but actual experience with any of these drugs at the bedside, cannot be overemphasized. The theories of the mechanism of action may undergo repeated changes, while experience remains unchanged. Suffice it to mention the example of encountered digitalis intoxication following mercurial diuretics. Formerly, this was explained on the basis of digitalis mobilization from the profuse diuresis. We explain this observation now on the basis of potassium loss. The alert clinician, however, knew from experience of occasionally encountered digitalis intoxication following the use of this diuretic and regulated the dose of digitalis accordingly.

We are fully aware of the fact that potassium deficiency is an inevitable accompaniment of progressive cardiac edema and an integral part of the genesis of that syndrome, and we have also learned to interfere to some extent with this ion loss which results from the renal ion exchange process (in which intratubular sodium is replaced by intracellular potassium) or other factors in addition to

the renal ion exchange process.

The response to diuretics can often be predicted from the interpretation of the sodium-potassium ratio in the urinary electrolytes, and where necessary the electrolyte imbalance can be corrected in order to produce greater responsiveness to diuretic therapy. We have found that urinary outputs below 20 mEq of sodium, in the presence of excessive potassium output, will be seen in those patients who have become unresponsibe to diuretics and who will become more prone to digitalis intoxication from the added electrolyte imbalance. This abnormal sodium potassium ratio must be corrected before proper diuresis is to be achieved. It is a well known observation that proper results in a patient with congestive heart failure will not be achieved by correction of the cardiac dysfunction alone; concomitant establishment of favorable circumstances for proper diuresis are of equal importance in achieving results.

The loss of potassium from thiazide is often corrected by addition of potassium in the form of KCL, but apart from the fact that this mode of treatment is not always without danger, it does not correct the disturbance of the sodium potassium ratio, which results from the ion exchange mechanism operative at

the distal tubular level.

Supplements of potassium for available exchange cannot be expected to enhance sodium output, and will not correct the electrolyte imbalance nor en-

hance edema loss by any direct renal mechanism.

It is to be stressed that potassium depletion is a contributory factor in the deterioration of the patient with edema. In view of the fact that the plasma values do not reflect the state of total body intracellular potassium, the serum electrolytes are only of limited value in assessing a state of affairs which is known to be insidious in onset. Our studies so far would indicate that estiation of the sodium potassium ratio in the urine may be a reliable indicator of

the presence of such an electrolyte imbalance.

The potassium loss from thiazides in the hypertensive patients, on the other hand, will often be adequately replaced by additional potassium, but not so in the patient with advanced heart failure. Here the spirolactones, by antagonizing the aldosterone effect of increased sodium reabsorption, will often be of great benefit. Because of its cost and because of the occasional complication, namely hypernatremia and increased BUN, this drug cannot be used as often as one would wish. Prolonged use may lead to gynecomastia as well.¹

We were, therefore, eager to study a diuretic having a beneficial action on the ion exchange mechanism at the distal tubule, a drug quite different

from the spirolactones, as its mode of sodium blocking is a direct one.

This drug is Triamterene, a pteridine derivative, chemically quite different from the thiazides. It has been shown that it has a distal tubular action and interferes with the ion exchange mechanism at this level by directly blocking² the sodium absorption not by acting antagonistically to aldosterone, and, there fore, different from the spirolactones. Triamterene may be called an "antialdosterone-like" diuretic in so far as it interferes with sodium absorption. The

decrease in potassium excretion, on the other hand, is related to its effect on tubular potassium transport.

Being different from the spirolactones, it will act synergestically with these

drugs and will also increase thiazide diuresis to a very great extent.

Triamterene alone will lead only to moderate natruresis and if used alone, has merits in that it does not bring about too vigorous diuretic therapy, particularly in those patients in whom acute reduction of blood volume is not desirable and where digitalis sensitivity is a primary concern of the clinician. It is important to stress that it has a cumulative effect. Its diuretic action, therefore, particularly in comparison with other diuretics, can only be judged by continuous administration for a period of at least four to five days. Clinical observation would seem to indicate that a greater natruresis will be observed if the drug is used intermittently, e.g., four days on and two or three days off.

When a greater diuresis is desirable, addition of thiazides on the third or fourth day of triamterene treatment is followed by marked diuresis and natruresis without noticeable potassium loss. We often encounter reduction of sodium excretion following prolonged uninterrupted use of triamterene alone or one or two days following omission of triamterene in combination with thiazides on our four day schedule. At this moment, a satisfactory explanation of this observation cannot be given. In those cases with prolonged triamterene treatment (over four days), where reduction in sodium excretion has been noted, the addition of thiazides will lead to further diuresis with increased sodium excretion, provided treatment is given intermittently. Omission of triamterene for two to three days, seems to be necessary, particularly where the drug is used on a prolonged basis. We have noted a similar effect in a few cases following Spirolactone treatment alone, but in contrast to Spirolactone, no hyperkalemia was noted in our patients treated with triamterene. In a few cases, unresponsive to added spirolactones, beneficial response was noted with triamterene and thiazides.

Of particular importance is the use of this drug in the older patient in whom a greater sensitivity to digitalis intoxication from thiazides is often en-

countered, these patients being more prone to excessive potassium loss.

Triamterene thus prevents the congestive patient from becoming apathic and weak and induces re-establishment of the electrolyte balance necessary for effective diuresis in the congestive patient. As there is no potassium loss, even if used in combination with potent thiazides, additional potassium is not required. In those cases admitted to the hospital with digitalis intoxication, our results with triamterine alone, or triamterine in combination with other diuretics, have been most gratifying, and even in cases with marked features of digitalis intoxication, in our experience additional potassium has not been required in the correction of the arrhythmias. Caution should however still be used where digitalis intoxication is severe, as despite its dangers, potassium replacement may become mandatory. Potassium in such cases is not without danger, if one considers that the uptake of extra cellular potassium by skeletal muscle is interfered with following toxic doses of digitalis and transient hyperpotassemia may become a dangerous feature if potassium is administered too rapidly.

In a few cases with edema from liver cirrhosis, our results with triamterene have not been very favorable. Here a different mechanism for the potassium loss has been advocated and spirolactones with mercurial diuretics

were found to be of greater benefit to these patients.

Our present-day experience would, therefore, indicate that Triamterene should be used for four days with three days omission and that the best diuretic effect is achieved if a thiazide preparation is added on the third and fourth days. At times, synergestic action with spirolactones has also been noted. However, with the thiazide and spirolactones as well, increased sodium retention or reduced sodium exerction, not regularly associated with increase in body weight, has been noted from each augmented phase of diuresis, (this is on the fourth or fifth day of treatment) associated parodoxically as it may sound, with improvement of the patient's condition.

Summary: The importance of preventing electrolyte derangement in the treatment of the patient with congestive heart failure, has been briefly discussed. Adequate response to divertic therapy depends not only on correction of the cardiac dysfunction, but upon establishment of electrolyte balance, which is necessary for a proper diuretic effect. The danger of excessive diuretic therapy with present-day diuretics is particularly great and a better understanding of the mechanism of action of these drugs is necessary.

sirable effect of the thiazides is not limited to the potassium loss alone.

Secondary hyperaldosteronism (as the result of sodium loss) together with hypokalemia from chloride loss in hypochloremic alkalosis, may lead to further electrolyte imbalance and enhance digitalis sensitivity. Potassium deficiency is an inevitable accompaniment of progressive cardiac edema and is not to be overlooked, as it constitutes an integral part of the genesis of the syndrome. Interference with the ion exchange mechanism can be achieved by the use of Triamterene alone or together with other diuretics, resulting in correction of undesirable electrolyte balance and effective diuresis. This drug will, therefore, be a very important the apeutic addition in our treatment of congestive heart failure.

Our experience with this new drug will be reported in greater details in the very near future.

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A Critical Study of One Hundred Caesarean Sections

E. Pereira, M.B., B.S., M.R.C.O.G.

The old dictum "once a caesarean always a caesarean" no longer holds in many obstetrical centres. Although opinions vary, there are those including Dieckmann, Greenhill, Lynch and Theobald¹, etc., who believe in repeat elective caesarean sections, there are many who disagree with this dictum, and have attempted to disprove it viz. McLane, James, Wilson, Browne¹, etc. The pendulum appears to be swinging alway from repeat elective caesarean sections for non recurring causes.

The following survey was undertaken as a critical review of one hundred cases of caesarean section performed at a modern teaching hospital with more than adequate facilities and fully qualified personnel. Although this is a small series, it reveals certain tendencies to resort to caesarean section (in some instances) as the most "convenient" procedure, or perhaps as the easiest way out.

CLINICAL MATERIAL

One hundred consecutive caesarean sections performed between 1960-1963 were chosen for review. Some of these were "primary" caesarean sections, others were "repeat" caesarean sections. Wherever possible, the indication for the "primary" caesarean section has been sought in the repeat caesarean sections.

MATERNAL AGE

The patients' ages varied from 18 to 44 years, the average age being 29.04. 75 percent of them were under 35 years of age (Table I). There were two patients who were 18 years old, one of whom was a single primigravida.

TABLE I.

MATERNAL AGE	NUMBER OF PATIENTS	PERCENTAGE
Below 20.	5	5%
20-24.	26	26%
25-29.	24	24%
30-34.	19	19%
35-39.	22	22%
40 and over	4	4%

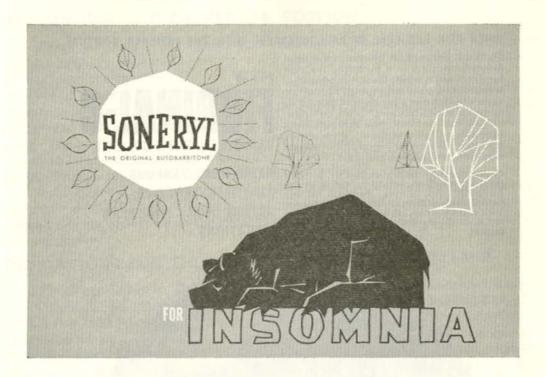
PARITY

A greater number (73%) of caesarean sections were performed on multigravidas than on primigravidas (27%). The ratio being almost 3:1.

PREVIOUS VAGINAL DELIVERY

The number of patients who previously had one or more vaginal deliveries was 44. Some of these patients had a repeat caesarean section for a non recurring cause.

^{*}From the Department of Obstetrics and Gynaecology Halifax Infirmary.



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INDICATIONS FOR CAESAREAN SECTION

There were 46 repeat caesarean sections. Among these the indications for the primary caesarean section were unknown in 5, doubtful in 8, fixed in

20, and non recurring in 13.

Fixed indications included cephalopelvic disproportion, previous classical caesarean sections, Shirodkar repair of the cervix, and recurrent and persistent transverse lie. The non recurrent indications included antepartum haemorrhage, i.e., placenta praevia and abruptio placenta. Also included were toxaemia in the first pregnancy which did not recur in the pregnancy in question, foetal distress, malposition, prolapsed cord and footling presentation.

Among those classified under doubtful indications were "Kidney infection" occurring during the first pregnancy, and a classical caesarean section done for alleged disproportion when the patient had previously had an infant of the same

size vaginally.

INDICATIONS FOR THE PRIMARY CAESAREAN SECTIONS

These are listed in Table II. There were 54 Primary caesarean sections, and although the majority of these appeared to be genuine indications, there were a few that were considered doubtful or even definite contra-indications to caesarean section. These have been listed in table III. It is interesting to note that some patients with mild degrees of placenta praevia were sectioned. Stallworthy² considers a posterior placenta praevia to be a dangerous one. It is, only if it prevents the foetal head from becoming engaged. In other words, the mild degrees of placenta praevia, i.e., Type 1 anterior and posterior, and Type 2 anterior, according to British terminology³ (or the low 'dipping placenta') will usually permit of vaginal delivery if the membranes are ruptured with a "double set-up" and the head is made to descend into the pelvis acting as a tamponade to prevent further separation of the placenta and bleeding; always providing that there is no foetal distress or excessive vaginal bleeding.

The classical caesarean section was used on one occasion for a placenta praevia. This was considered unnecessary as most authors are now agreed that a lower cervical caesarean section serves the purpose just as well with no added

risk to mother or infant, and is less likely to rupture at a later date.

Another point of interest is the fact that post maturity as such is denied by most of the obstetricians in this area, and yet the presence of "greenish liquor" which, as Walker has shown, often occurs in a patient who is overdue by dates, was taken as an indication of foetal distress despite a regular foetal heart. This appears to be inconsistent.

One of the diabetic patients had previously had 5 vaginal deliveries of infants ranging from 7 lbs. 5 oz. to 11 lbs. 3 oz. There appeared to be no real indication for a caesarean section with the sixth infant, where an induction

of labour would have served equally well.

The doubtful causes in Table III include a diabetic with heart failure. Most authorities are agreed that a caesarean section in the presence of heart failure can be disastrous, and one would have thought the section in this particular case was contra-indicated.

Two patients with transverse lie and intra uterine infection were subjected to caesarean section in the absence of any contractions or foetal distress. It would appear that these would have been better off to have had the uterine

infection controlled with antibiotics prior to performing a caesarean section,

especially in the absence of an urgent indication.

INDICATIONS FOR PRIMARY SECTION

The patient with a breech presentation and uterine inertia in the presence of an adequate pelvis (proved by radiological examination) would perhaps have been better off with a pitocin drip, since a breech presentation per se is no longer considered a contraindication to a pitocin drip in the presence of an adequate pelvis.

TYPE OF CAESAREAN SECTION

Ninety percent of the patients had a transverse lower segment caesarean section, and one had a vertical lower segment section for a transverse lie. Two patients had classical caesarean sections, one because of two previous classical caesarean sections, and the other was done for a placenta praevia. The 7 caesarean hysterectomies were performed for various reasons. Two patients had the bladder inadvertently opened during the repeat caesarean section because of adhesions, and this was the indication for the hysterectomy. Four patients had thinned out lower segments with possible incipient rupture, and a caesarean hysterectomy was considered the safest procedure. It is interesting to note that the only patient with a ruptured uterus had previously had a classical caesarean section, and on this occasion a hysterectomy was performed.

NUMBER OF PATIENTS

TABLE II

INDIONITIONE FOR TRIMING DECITOR	NONIDER OF THIRDING
Deflexed head with uterine inertia	2
Placenta Praevia	9
Foetal distress	5
Cephalopelvic disproportion	5
Severe preeclampsia -	4
Previous myomectomy	1
Previous utriculoplasty	1
Abruptio placenta	3
Brow presentation	3
Haemolytic disease	2
Breech with prolonged labour	1
Vasa praevia	1
Elderly primipara with P.O.P.	1
Outlet disproportion with breech	3
Uterine inertia -	2
Diabetes	2
Prolonged labour	2
Failed trial of forceps	1
Elderly primipara with mild preeclampsia-	1
Breech with uterine inertia and failed induction -	1

TABLE III - DOUBTFUL INDICATIONS FOR PRIMARY C.S.

Reasons given	for performing caesarean section.	Number
Diabetes with	heart failure.	1
Transverse lie	(with uterine infection) (patient not in labour.)	2
Breech with ut	erine inertia (adequate pelvis and no foetal distress.)	1

PERINATAL MORALITY

The perinatal mortality was 7 percent. This included 1 term and 2 prema3 ture infants who succumbed with pulmonary syndrome. 2 infants had severe haemolytic disease, one was a still born hydrops foetalis, the other died shortly after birth despite an exchange transfusion. One infant was reported to have had "brain damage" and another was stillborn because of a ruptured uterus.

PERINATAL MORBIDITY

14 infants delivered by caesarean section had a prolonged stay in hospital, and prematurity was an important factor in detaining them in the nursery.

MATERNAL MORBIDITY

13 percent of the mothers were morbid. Complications included inadvertent opening of the adherent bladder on two occasions, 3 wound infections and one post-partum shock with adrenal insufficiency. Post partum shock followed by paralytic iteus was encountered in one patient, and in another, the morbidity was due to a breast infection.

In yet another patient, the uterus was torn up to the fundus in an attempt to deliver a transverse lie through a lower segment transverse incision in the presence of uterine infection, thus jeopardizing her in future pregnancies. This is all the more regrettable since the patient was not in labour and there was no indication for an immediate caesarean section. This patient was an unmarried primigravida.

SUMMARY AND CONCLUSION

A critical analysis of one hundred caesarean sections is presented. According to Allahbadia, Williams, Wilson, Mason, Dill, D'Esopo, Douglas et al,¹ "the incidence of caesarean section has increased manifold in recent years." Colvin,⁴ Posner⁵ and Schneider⁶ have stated that the operation is resorted to for the termination of almost any obstetric problem.

Many authors agree that the wider use of caesarean section has been abused, and the operation is done too often for doubtful or non valid indications. Others such as Burkons, Schnitz, Adair and Brown, Cosgrove and Smith believe that a trial of labour is indicated in patients who have had a caesarean section for an indication no longer present. They state that the obstetrician assumes less maternal risk than if he does "repeat sections" routinely. Repeat sections performed with the mentality of "once a section always a section" often lead to the delivery of premature or immature infants who do not survive.

There are those who defend a repeat caesarean section on the grounds that successful vaginal deliveries accomplished with meticulous care in preparation for disaster, do not prevent the occasional ruptured uterus, dead foetus. However, with the increasing use of the lower segment or maternal death. caesarean section, Eames11 has found that the expected maternal mortality in patients given a trial of labour where a caesarean section had been done for a non recurrent cause was 0.05 percent for the classical scar rupture, and 0.01 percent for the lower segment scar rupture. He further points out that 24 percent of the ruptures occur before the 37th week, i.e., before an elective caesarean would be done.

According to Klein, Robbins and Gabaeff, 12 every woman deserves a chance to be delivered vaginally. However, in giving her this opportunity, the obstetrician must not unknowingly deny her the chance of a living baby by allowing her to labour indefinitely. The timing of the caesarean section is therefore of utmost importance. Although the safety of caesarean sections is now being stressed, it must be remembered that the maternal morbidity and mortality is far higher than in vaginal deliveries.

The relative ease with which caesarean sections can be performed invites laxity on the part of the obstetrician, who sometimes lets himself be coerced by the pressure of impending appointments, harassing relatives or anxious general practitioners into performing caesarean sections unnecessarily.

We are told that the transcendent objective of obstetrics is that every pregnancy culminate in a healthy baby as well as a healthy mother. It therefore follows that procedures that would cloud a patient's obstetrical future should not be lightly undertaken.

A trial of labour calls for more effort and attention on the part of the obstetrician.

The alternative to this is an unnecessary caesarean section; the incidence of which would seem to indicate that the welfare of the patient is not always of paramount importance in that the obstetrician occasionally allows himself to bow to expediency.

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10.



Hypersensitivity to Phenothiazine

JANET SY, M.D.

The Phenothiazine group of tranquilizers which include Thorazine, Compazine and Stelazine are capable of producing the most alarming extrapyramidal symptoms. Moditen (Fluphenazine Dihydrochloride) has a sustained and prolonged action for 24 hrs. in most patients. Chemically it is 4-3(3-2) (Trofluremethyl) 10 Phenothiazyl Propyl I- Piperazine.

Symptoms include severe torsion spasm, extension of neck and back, yawning, oculogyric crisis and other bizarre central nervous system manifestations mimicking epileptic seizures. The clinical picture may suggest a men-

ingitis.

Children with a history of hypersensitivity to various allergens or with a strong family history of allergy should be observed closely when it is found necessary to give them drugs. Any other non-essential drug should be withheld. It would seem rarely necessary to use tranquilizers in ordinary pediatric practices.

Case History:

An 11 month old white female was admitted to the Halifax Infirmary in a semi-comatose state, with prominent arching of the back, stiffness of the extensition and relling of the area. She was afabrile an admission

tremities and rolling of the eyes. She was afebrile on admission.

The history states that she had been well prior to this present illness. She is known to be hypersensitive to her quadruple vaccine immunization showing an exaggerated local and generalized reaction. A sibling with asthma is being desensitized.

Three weeks prior to admission, she developed loose stools and was hyperirritable. The physician was consulted and the baby was placed on boiled skim milk and Moditen was ordered as a tranquilizer. Four days prior to admission she developed a fever and was very irritable. Another physician was

consulted and the baby was placed on an antibiotic.

The mother stated that she had used the tranquilizer at irregular intervals during the past few weeks, but in full therapeutic doses in the three days prior to admission. It was noted by the mother that the child had a staring look at times during the entire illness and in the few hours prior to admission, the child's eyes rolled up frequently, she responded less to stimulation and the

body seemed stiff.

On admission, a spinal tap was performed. A blood culture and throat culture were taken. The C.S.F. was not under increased pressure and the fluid appeared clear. Because the clinical picture suggested a partially treated meningitis, the baby was started on the routine antibiotics - Chloromycetin, Crystalline Penicillin and Sulfadiazine - I.V. The laboratory reported a normal white blood count and differential, normal C.S.F. cell count and chemistry and normal serum electrolytes. The antibiotics were then discontinued. It was decided to watch the child before further investigation. An I.V. of glucose and water was started.

In the first four hours following admission, the neurological findings changed frequently. There were periods of tremors, spasticity and flaccidity

^{*}From the Department of Paediatrics, Halifax Infirmary.

of upper extremities. The level of consciousness and the ability to focus improved slowly. Eight hours after admission she responded well to stimulation and was able to stand in the crib. The following day all of the bizarre symptoms disappeared and she was essentially normal.

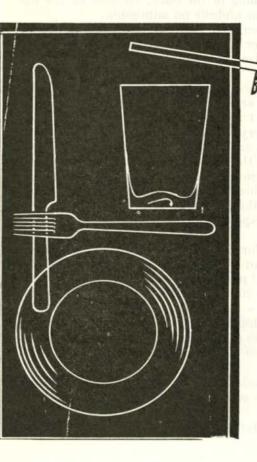
Diagnosis:

When the nature of this child's disturbance was realized, her recovery was well advanced. No further diagnostic procedures were performed.

In most obscure cases the diagnosis may be confirmed by the Forrest test. Several drops of 5% Ferric Chloride is added to boiled acidified urine. A violet to purple color indicates either salicylates or Phenothiazine.

Treatment:

In this case, the response to I.V. fluids and removal of the Moditen was sufficient to cause a complete recovery. In more resistant cases, it may be necessary, in addition, to use antidotes such as I.V. Benadryl, Caffeine Sodium Benzoate or some Antiparkinsonian drug.



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PMACELITICALS 7





Pneumonectomy And Lobectomy in Bronchogenic Carcinoma*

In a comparative study of 5-year survival rates of patients treated for carcinoma by removal of the entire lung and others by the excision of the affected lobe only, it was found that the more radical operation did not increase the chance of survival.

Since a systematic analytical comparison of available data on the treatment of bronchogenic carcinoma by pneumonectomy and by lobectomy was desirable, Dr. Alton Ochsner of New Orleans, who has consistently espoused pneumonectomy for lung cancer, and Dr. Richard H. Overholt of Boston, who in recent years has tended to use lobectomy as the treatment of choice, agreed to permit the Biometry Branch of the National Cancer Institute to compare the survival of their surgically treated patients.

The study group from the Overholt Clinic consisted of 327 surgically-treated patients with carcinoma of the lung diagnosed during 1951-1956. Of these, 211 were pneumonectomies and 116 were lobectomies. X-ray treatment was limited to 19 per cent of the pneumonectomies and 6 per cent of the lobectomies. Only two patients received adjuvant chemotherapy (nitrogen mustard) following pneumonectomy as part of the primary treatment, and one patient received both X-ray and chemotherapy following lobectomy.

The study group from the Ochsner Clinic consisted of 205 patients who were subjected to resection during 1948-1956. All but 15 had pneumonectomies. The standard procedure is the removal of the entire involved lung with an en bloc excision of the mediastinal nodes. At this clinic 65 per cent of the patients who underwent a pneumonectomy received no adjuvant therapy. In 35 per cent, the primary treatment included the addition of X-ray therapy (3 per cent), chemotherapy with nitrogen mustard (27 per cent), or both (5 per cent).

Three groups of patients

There were, therefore, three main groups of patients treated surgically for primary lung cancer: (1) Overholt pneumonectomies, 211 patients, of whom 122 (58 per cent) had mediastinal lymph node dissection; (2) Overholt lobectomies, 116 patients, of whom 41 (35 per cent) had mediastinal lymph node resection as the exposure allowed; and (3) Ochsner pneumonectomies, 191 patients, of whom 181 (95 per cent) had mediastinal lymph node dissection, usually en bloc with the lung.

The 5-year survival rate was definitely higher for patients treated by the Overholt lobectomy (27 per cent) than for patients treated by pneumonectomy (19 per cent at the Overholt Clinic and 15 per cent for the Ochsner Clinic).

The single most important determinant of prognosis is probably the anatomical extent of involvement. The three groups of patients analyzed were classified as "localized" cases, i.e., those in which the tumor was confined to the lung or bronchus and in which no direct extension to neighboring tissues or metastasis was found, and "not localized," i.e., those in which there were regional lymph node metastases or extension of the tumor beyond the lung.

^{*}Reprinted from the Abstracts of the National Tuberculosis Association, April 1963.

The proportion of the more favorable, localized cases is highest in the Overholt lobectomy group, 52 per cent in contrast with 21 and 26 per cent in the Overholt and Ochsner pneumonectomy groups, respectively. Thus, a major factor in the better survival following lobectomy is the greater proportion of patients with localized tumors selected for lobectomy.

Localized Tumors

Among localized cases, the observed 5-year survival rates for the three operation groups were practically identical. Among non-localized cases, the survival rate was significantly lower following the Ochsner pneumonectomy than for Overholt patients treated by pneumonectomy; the results following the Overholt lobectomy were not significantly different from either pneumonectomy group.

The clinical significance of these observations is difficult to evaluate since the considerations which led to the use of more extensive surgery in some cases and less in others are not fully known. However, the available evidence suggests that less extensive surgical procedures are related to survival rates that are at least as good as, and perhaps better than those recorded fol-

lowing more extensive surgery.

The data from the Overholt and the Ochsner clinics were compared with similar data from 99 hospitals in the United States on more than 8,800 cases, as reported by the End Results Group of the National Cancer Institute. The end results are similar and emphasize the universally grim prognosis of this neoplastic disease.

The 5-year survival of approximately 8 per cent among all patients with bronchogenic carcinoma seen at the two clinics compares with 6 per cent in the 99 hospitals. This small salvage is achieved only by surgical resection.

The available data lead to the following conclusions:

Survival after surgical resection was primarily determined on whether the tumor was localized or had extended to lymph nodes or contiguous tissues beyond the lung.

2. Survival in patients with localized lung cancer was similar whether lobectomy or pneumonectomy was performed. The available evidence does

not clearly delinate the efficacy of lymph node dissection.

 Survival of patients with non-localized carcinomas was lower following pneumonectomy with mediastinal lymph node dissection than after more limited pneumonectomy or lobectomy.

4. Survival in these series was not demonstrably improved by the addi-

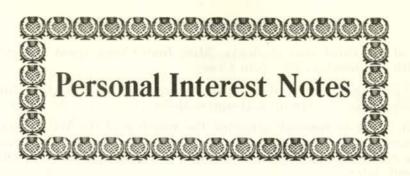
tion of X-ray therapy or chemotherapy with an alkylating agent.

Tumors classified as being histologically undifferentiated had a graver prognosis than the epidermoid neoplasms or the adenocarcinomas.

6. Survival was not demonstrably related to the size of the primary tumor, the site of the primary tumor within the lurg, or the age and sex of the patient.

In regard to Point 3 it may be said that the less extensive operations do not save more patients, but the more extensive operations increase mortality.

The tragic limitations of effective treatment of bronchogenic carcinoma, and the established causation of an important proportion of this neoplasm by cigarette smoking, make the disease a challenge to preventive medicine as well as to cancer research.



FLASH BACK: In the Provincial Election of October 8, 12 out of the 43 seats were contested by M.D.'s. Not all were successful. Four of the province's best known doctors, Dr. C. H. Reardon, Halifax West; Dr. Duncan MacMillan, Sheet Harbour; Dr. W. C. O'Brien, Yarmouth; and Dr. E. D. MacArthur, suffered defeat at the hands of their Conservative opponents. A Liberal survivor, was Dr. C. L. MacMillan of Victoria—by 37 votes. Dr. H. J. Pothier, veteran country doctor captured the Clare seat from the Liberals. In King's West it was a doctor for doctor—Conservative Dr. E. P. Kinsman winning from Dr. E. D. MacArthur of Berwick. Dr. N. J. MacLean, Inverness split the dual riding, long a Liberal stronghold.

IN THE NEWS

Residents of Baddeck and many of Victoria County, recently foregathered to celebrate the 35th anniversary of the start in practice in Baddeck of Dr. C. L. MacMillan (see above). The press reports that a presentation was made to him by the first baby delivered by him on the first day of his practice.

Dean C. B. Stewart and Dr. Lea C. Steeves, director of postgraduate division, Dalhousie University Faculty of Medicine, were among those discussing programmes of "continuing education" for the practising physician during the annual meeting of the Association of American Medical Colleges in Chicago, Oct. 25-30.

"Weymouth Area Needs Doctors" was the caption lately in the press. Of the two doctors, one is full time and the other semi-retired. Dr. F. J. Doucet is at present in hospital. The 5000 people in the area are making every effort to secure more medical practitioners.

On October 20th at 11 a.m. in the Cathedral Church of All Saints, Halifax, was held the second annual service to commemorate St. Luke's Day. A portion of the cathedral was reserved for members of doctors' families and a far too small procession of practitioners followed the choir to seats in the canon's stalls. The service was broadcast with Dean E. N. B. Cochrane being the preacher. The lessons were read by Dr. F. Murray Fraser, past president of the College of General Practitioners of Canada and Dr. C. J. W. Beckwith, Executive Secretary of The Medical Society of Nova Scotia. The sidesmen were medical students.

The Federation of Medical Women of Canada, Nova Scotia Branch, were hostesses to the women students in Medicine attending Dalhousie, at the home of the President, Dr. Helen M. Hunter. There are twenty-five students in the various years with five scheduled to graduate in May. The third year has the largest number - ten. Over \$60.00 was raised by an auction of articles, donated by those present.

One of the third year students, Miss Joan Casey spent the summer in Africa with her brother, Dr. Tom Casey.

The two fourth year students spent the summer months at St. Anthony's, Newfoundland, in the Grenfell Hospital there.

Dr. J. F. Ross recently attended the meeting of the World Congress of Plastic Surgeons in Washington, D.C. Next May the Canadian Association of Plastic Surgeons will hold their Annual meeting in Halifax. Definite announcement later.

MY MOST UNFORGETTABLE CHARACTER

By Dr. H. W. Schwartz

(Ed. We hope that this will start a series of Unforgettable Character sketches

connected with Dalhousie Medical School).

My most unforgettable character was my Professor of Chemistry, Ebenezer MacKay at Dalhousie University in Halifax, Nova Scotia. When I say I never take a cork out of a bottle without thinking of this teacher, both Dr. MacKay and myself are apt to be misunderstood. Stopper, not cork, is the correct word. Woe to the student who, removing the glass stopper from a chemical containing vessel, placed it on the desk, instead of holding its flat surface between middle and index finger, before pouring its contents because of the risk of contamination.

When in the course of time operating room technique had to be observed the risk of glove or instrument being infected should it come in contact with the unsterilized always left me in mind of the exact and precise Ebenezer. Here I am, as the saying is, with one foot in the grave and yet hardly a day passes that I do not think of that gifted teacher.

Writing the foregoing was prompted by reading in part the report of the President of Cornell University 1962-1963, in which is mentioned two prizes established by Philip Sporn, President of the American Electric Power Com-

pany of New York.

The prizes are unique in that the rewards are not the decision of the professors but of the students in judging who they considered the best teachers.

Had I the means I would like to establish a similar means of recognition

in the Faculty of Medicine, Dalhousie University.

I would sooner be remembered by my students as a helpful teacher than that they remember me because of my oddities and eccentricities.

BIRTHS

To Dr. and Mrs. Douglas Brown (Dr. Pamela Brown) a daughter born at London, Ontario (Victoria Hospital) on October 20, 1963.

To Dr. and Mrs. Philip Jardine, Musquodoboit Harbour, a son, Donald Harry, at the Grace Maternity Hospital on October 19, 1963.

To Dr. and Mrs. Malcolm MacAulay, a son at the Grace Maternity Hospital, on October 15, 1963.

To Dr. and Mrs. James H. MacLeod, a daughter, Jacqueline, at Queens General Hospital, Liverpool on September 13, 1963.

MARRIAGES

Dr. Roy Douglas Pike, a recent graduate in Medicine of Dalhousie, son of the late Mr. and Mrs. J. Pike of Carbonnear, Newfoundland, was married last month to Miss Eileen Gallagher, daughter of Mr. and Mrs. J. Gallaghar of Halifax. Dr. Pike is practising in Come-By-Chance at the Walwyn Hospital.

CLINICS - Held under the auspices of the Nova Scotia Society for Care of Crippled Children.

The team is composed of Dr. J. C. Acker and Dr. A. M. Sinclair, orthopaedists, and Dr. N. B. Coward and Dr. R. M. Ritchie, paediatricians.

CLINIC SCHEDULE

Nov. 4, Neil's Harbour; Nov. 5, Baddeck; Nov. 6, and morning of the 7th, Guysboro; Nov. 12, Truro; Nov. 12, 13 and morning of the 14th, New Glasgow; afternoon of Nov. 14th.

Throughout the last week of October and the whole month of November, clinics will be held in the following places, New Waterford, Windsor, Neil's Harbour, Baddeck, Port Hawkesbury, Guysboro, Truro, New Glasgow, Pictou, Springhill, Digby, Bridgewater, Liverpool, Shelburne and Lunenburg.

COMING MEETINGS

The American College of Physicians. Postgraduate Course No. 6. Psuchiatry for the Internist.

December 2-6, 1963. Meeting Place Los Angeles County General Hospital December 2-6, 1963. Advances in the Medical Aspects of Cancer. Meeting at Francis Delafield Hospital, N.Y.C.

These are but the next two of the seventeen courses offered in various places during the coming season under the auspices of the College. Requests for information may be directed to Edward C. Rosenow, Jr., M.D., Executive Director, The American College of Physicians, 4200 Pine St., Philadelphia 4, Pa.

DALHOUSIE POST-GRADUATE DIVISION INTRA MURAL COURSES

Short Course in Psychiatry - February 3rd to February 5th, 1964.

Short Course in Surgery - March 2nd to March 6th, 1964.

Taken from the AMA News published by the American Medical Association, October 14th, 1963, Page 9, Scanning the News.

Mr. Chiropractor: Chiropractors in New York State did not gain the privilege of using the title "doctor" as a result of a new state law which authorizes the licensing of Chiropractors after Dec. 1st. An attorney for the State Education Department which will administer the licensing law said, "any chiropractor using the title of doctor would be guilty of a misdemeanor."

IT HAPPENED HERE

Frantic telephone call from mother to poison centre:

Mother: What shall I do? My child has just swallowed a toadstool. Doctor: Bring her in at once, - and bring the toad along with you.



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