

Notes and Announcements

World Federation of Neurology. Dr. Henry Dunn, the Canadian Neurological Society delegate to the WFN, attended a meeting of the council of delegates in Hamburg, June 10-11, 1983. Dr. Dunn also attended the meeting of the Research Committee of WFN held at the same time. He reports that there are a number of active research groups affiliated with the WFN dealing with topics such as multiple sclerosis, neuro-epidemiology, aging and dementia, pediatric neurology, restorative neurology, cerebrovascular disease, neuroimaging, and neuro-oncology. Dr. Andre Barbeau is secretary of the research group on heredoataxia. Dr. Andrew Kertesz is a member of the research group on aphasia. Dr. Dunn suggests that Canadian neurologists and neuroscientists may wish to become more involved in some of these research groups. A complete list of the research groups and the secretaries can be obtained from Dr. Dunn or can be found in the recent newsletter from the World Federation of Neurology.

XIII World Congress of Neurology. The next World Congress will be held in Hamburg, Germany, September 1-6, 1985. Four main themes have been selected for the congress from a list of over 20 topics proposed by the delegates. The themes are as follows: Brain and Behaviour, Aging and the Dementias, Neuroimaging, and Neuro-epidemiology and Clinical Trials.

Immediately preceding the World Congress of Neurology, the 11th International Congress of EEG and Clinical Neurophysiology will be held in London, England, August 25-30, 1985. Further details regarding the program for this congress will be provided in a subsequent newsletter.

Research Funding for Alzheimer's Disease. The Alzheimer's Disease and Related Disorders Association, Inc. (ADRDA) is pleased to announce the 3rd annual ADRDA Research Grant program.

This grant program will award funds to help develop new research initiatives and establish the feasibility of new products. The objective of ADRDA is to bring new investigators into research on Alzheimer's disease and help established investigators develop new approaches to our understanding of etiology, pathogenesis, treatment, management, and prevention. Grants will be awarded to non-profit institutions for use by individual investigators at a maximal level of \$12,000.00 for one year.

Applications must be received no later than March 1, 1984, for funding to begin June 1, 1984. Further information and application forms may be obtained by writing to: Alzheimer's Disease and Related Disorders Association, Inc., 360 North Michigan Avenue, Chicago, Illinois 60601.

Amyotrophic Lateral Sclerosis Society of Canada. The ALS Society of Canada offers a limited number of research fellowships designated to provide post-doctoral training in ALS research for outstanding candidates. The society also has some funding available for project grants to aid investigators in studies related to ALS.

Further information and application forms can be obtained by writing to the Amyotrophic Lateral Sclerosis Society of Canada, 234 Eglinton Avenue East, Ste. 305, Toronto, Ontario M4P 1K5.

American Academy of Neurology — 1984 In-Service Training and Continuing Self-Assessment Examination. The 11th Annual Examination in Neurology will be given throughout the United States and Canada on Saturday, May 12, 1984. The examination will consist of approximately 480 multiple choice questions, utilizing the format of the National Board of Medical Examiners, and will cover the following areas: 1) Clinical neurology, 2) Pediatric neurology, 3) Neuro-anatomy, 4) Neuropathology, 5) Neuropharmacology/Neurochemistry, 6) Neurophysiology (including EEG and EMG), and 7) Neuro-radiology.

House officers in each year of training are encouraged to take the examination. However, faculty members, practicing neurologists and trainees or practitioners in other specialties may take the examination at designated neurologic centres. The cost of the examination will be \$55.00 (US) for house officers and \$110.00 (US) for others. A \$5.00 advance registration discount will apply on all applications received on or before March 2, 1984. Deadline for receipt of applications is March 23, 1984.

For further information, write to: Examination, American Academy of Neurology, 2221 University Avenue S.E., Ste. 335, Minneapolis, Minnesota 55414.

Neuromuscular Diseases Congress in South Africa. The Muscular Dystrophy Research Foundation of South Africa is organizing an International Congress on Neuromuscular Diseases at Johannesburg's J.G. Strijdom Hospital in April 1985. The emphasis will be on the clinical aspects of neuromuscular disorders. Approximately 500 delegates are expected to attend. Accommodations will be arranged in the residences of the Witwatersrand University or at the Sunnyside Park Hotel.

Inquiries should be directed to Mrs. E. Archer, Secretary, Muscular Dystrophy Research Foundation of South Africa, P.O. Box 5446, Johannesburg 2000. In Canada, additional information may be obtained from Mr. F. Robert-Gage, Director of Resources, Muscular Dystrophy Association of Canada, 357 Bay Street (10th floor), Toronto M5H 2T7.

Canadian Neurological Society: Statement on Diagnostic Imaging Techniques

Purpose of the Report:

To state the views of the Society in hopes that Federal and Provincial governments will be influenced to establish effective longterm policy on this important matter, optimal care of patients with diseases of the central nervous system being the ultimate objective.

The value of Computerized Tomography (CT) Scanning and other diagnostic imaging techniques:

CT is firmly established as the definitive method of diagnosis in a wide variety of diseases of the brain, particularly brain tumor, brain hemorrhage, head injury and brain abscess. It is, thus, an essential diagnostic technique for most patients with

acute disease of the brain, especially if that disease requires immediate and definitive treatment, such as brain surgery. CT is also of great value in those diseases that develop slowly or whose ultimate treatment may be only palliative, since it assists the physician in instituting more effective treatment, whatever the type. It also establishes a firm prognosis, of particular benefit to the patient and relatives. There is no discomfort and little risk to the patient. Finally, through research, the technique has provided new insights into disease processes.

CT scanning of the brain has largely superseded previously utilized techniques; e.g. pneumoencephalography (a procedure accompanied by great discomfort), radionuclide brain scans and echoencephalography. Skull x-rays, electroencephalograms, conventional plain film tomography, cerebral angiography and positive contrast cisternography are now used less commonly.

The development of CT scanners has probably "peaked" and further improvements will occur only after extensive and costly research and development. However, procedures of a related nature are now emerging, the most significant being positron (single photon) emission tomography (PET), nuclear magnetic resonance (NMR) and digital vascular imaging (DVI).

NMR has several advantages over CT scanning. Artifact created by adjacent bone is eliminated, disclosing the contents of the spine and posterior fossa with greater clarity. Soft tissue density shows sharper contrast, so that white and grey matter is more easily distinguished. Sagittal and frontal pictures are more readily made aiding the spatial localization of lesions. The longer time for imaging per slice and the risk of injury to patients from metallic objects inadvertently left within the magnetic field of the machine are drawbacks. Finally, current evidence suggests that longterm harmful effects, although still not fully known, seem unlikely.

Positron emission tomography requires much more expensive equipment than either NMR or CT machines, although this expense is rapidly declining. More importantly, the staff required to operate it is large, and must consist of experts in a number of fields. However, the biochemical and physical information resulting from the procedure is still unrivaled by any other technique. Changes in glucose and oxygen metabolism, and cerebral blood flow, can be recorded repeatedly and with considerable qualitative and spatial accuracy. Important results have already been reported in patients with seizures, mental disturbances and stroke.

While both NMR and PET are still in the developmental stages, as far as clinical application is concerned, several have already been installed and are operating in Canada: NMR in Vancouver, London and Toronto, and PET in Montreal, Hamilton and Vancouver.

Digital vascular imaging demonstrates the blood vessels of the head and neck with almost the same clarity as conventional angiography. Contrast material is injected intravenously rather than intra-arterially, thus obviating the need for hospital admission. The equipment is relatively inexpensive and a number of machines are currently operating in several centres in Canada.

The Cost Effectiveness of CT Scanning:

The institution of this technique has resulted in savings which have easily offset the capital cost, installation and operating expenses through elimination of the other costly diagnostic techniques outlined above, thus shortening the length of patient stay in hospital, or eliminating the need for admission. It should

be noted that this cost saving will not be observed in the tertiary care hospital which has the scanner, since patients continue to arrive at such institutions for treatment, despite any improvements in efficiency and effectiveness of patient care. However, such savings would be noted in surveys which analyze the pattern of health care in a community.

The Role of CT Scanners in Diseases of the Spine:

There is emerging evidence that CT scanners will be the first line of investigation of common spinal conditions such as degenerative disc disease with nerve root compression, as well as less common diseases such as spinal cord tumor or other conditions which may compress or, in other ways, directly involve the spinal cord itself. The increased accuracy of diagnosis may eliminate, in many cases, the need for myelography and allow for more precision in deciding the need for spinal surgery or other treatment.

The CT Scanner Situation in Canada:

Canadian neurologists, neurosurgeons and neuroradiologists believe that government funding for the purchase and operation of CT scanners has been inadequate. It has been observed that the elective waiting time for a CT scan is excessively long, in many instances more than three months. In certain cases, admission to hospital has been ordered in an attempt to ensure urgent CT scanning. Even for in-patients, however, delays in having this procedure done may reach up to one week. This leads to suboptimal patient care and artificially long stays in hospital. In those large hospitals that do not have a scanner, transfer of patients to a nearby hospital is often risky and causes unnecessary delay in treatment.

A survey, reported to the Canadian Neurological Society in Calgary, Alberta, June, 1981, and conducted by its members, revealed that there was considerable variation in the ratio of CT scanning units to population within Canada, ranging from 0 in Newfoundland, and 1 per 500,000 in Saskatchewan and Nova Scotia, to 1 per 240,000 in British Columbia. Once British Columbia has all of its budgeted scanners approved, its ratio will be improved to 1 per 170,000. Provincial and Federal policy on CT scanners and other diagnostic imaging techniques remains highly variable, ranging from none in some provinces to relatively firm policies in Ontario. In most provinces, the input from neurologists and neurosurgeons has been minimal, radiologists being the main representatives to government.

Final Recommendations:

a) That all Provincial governments and the Federal government together establish policy to determine the type, number and location of diagnostic imaging devices per population base, so that the goals of optimal patient care will be met and regional disparities reduced.

b) That neurological, neurosurgical and neuroradiological representation be included in all government planning boards that decide such policy.

c) That in the light of rapidly advancing technology, this policy be reviewed every three years.

*C.F. Bolton, H.B. Dinsdale,
D.W. Paty, W.E.M. Pryse-Phillips*