

WORLD NEUROLOGY

THE NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY

VOLUME 15, NUMBER 1, MARCH 2000

REPORTS OF WFN-SUPPORTED CONFERENCES

Xth PAN-AMERICAN CONGRESS OF NEUROLOGY

A great success! The Xth Pan-American Congress of Neurology was held from October 9–14, 1999, in Cartagena de Indias, Colombia. It was organized by the Colombian Neurological Association in association with WFN.

The Organizing Committee was constituted by a select group of Colombian neurologists, in the country and abroad, together with foreign colleagues and with the great and wise support of the legendary Frank Clifford Rose, former Secretary-Treasurer of the WFN. 1051 delegates participated in one of the most beautiful cities of the world and a Historical Heritage site. The success of the Congress was confirmed during the 6 days by 8 WFN Educational Courses, 19 Symposia, 8 Plenary Lectures and 5 Satellite Symposia for a total of 187 presentations by 142 experts from 22 different countries of America, Europe and Asia in the modern International Convention Center. The themes included Stroke, Headache, Epilepsy, Tropical Neurology, Dementia, Movement Disorders and others, that were completed with clinical cases and videos at the end of each session, allowing an active academic interaction be-



At the 20th Salzburg Conference in Taipei, Taiwan, November 3–6, 1999.

tween the speakers and the audience. Moreover, there were several poster presentations.

The Assembly of Pan-American Delegates was integrated by 20 countries: Argentina, Bolivia, Brazil, Canada, Colombia, Cuba, Costa Rica, Chile, Ecuador, El Salvador, USA, Guatemala, Honduras, Mexico, Panama, Paraguay, Peru, Dominican Republic, Uruguay and Venezuela. The Organizing Committee of the X Pan-American Congress of Neurology was congratulated for the excellent academic quality and the successful organization of this event. Chile was selected as the venue of the XI Pan-American Congress of Neurology in 2003.

Professor Jun Kimura, as First-Vice Presi-

dent, represented the WFN during the opening and the closing ceremonies of the Congress. He expressed his gratitude and congratulations to the members of

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New Telephone / Fax Numbers

As of 22 April 2000, the telephone and fax numbers of the WFN Office in London will change to +44 20 7323 4011 (telephone) and +44 20 7323 4012 (fax).

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- WFN Millennium to Millennium
 - President's Report for 1999
 - Epidemiology of Epilepsy
- WFN Research Group Reports
 - New WFN Research Group
 - News
 - Book Reviews
 - Meetings Calendar

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WFN MILLENNIUM TO MILLENNIUM

In almost 5 decades since its inception, the World Federation of Neurology has made tremendous progress. It has entered the new millennium with stronger convictions to do and perform better. Let us remember and pay tribute to those who had the vision to set up such an organization in the last millennium. Ludo Van Bogaert from Belgium and Macdonald Critchley from the UK discussed the creation of this organization in 1956 and the former became founder President in 1957. The latter followed him as the second President of this august body. Their respective Secretary-Treasurer Generals, Pearce Bailey from the USA and Henry Miller from the UK supported them. David Klein from Switzerland and Armand Lowenthal from Belgium served as Joint Secretary and as Chairman of the Research Committee.

Sigvald Refsum from Norway took charge of the Presidency from Critchley, and in turn handed it over to Richard Masland of the USA. The latter, after 8 years in office, passed it on to John Walton. James F. Toole, who succeeded John Walton in 1998, was, coincidentally, a Fellow at Queen's Square Hospital, London in 1956 at the time that the formation of WFN was being negotiated and has now had the rare distinction of being the first WFN President to serve in two millennia!

Secretary-Treasurer General posts were held in succession by Prof. Olivarius, assisted by Juul-Jensen; James F. Toole (with Masland); and Frank Clifford Rose

(with Walton). Their performance, and that of the Presidents they served, was excellent, and WFN became a body to reckon with. The Research Committee chairmanship was held in turn by Franceschetti, John Walton and Klaus Poeck.

The reorganization of WFN is underway and it is taking new shape under James Toole's dynamic leadership. He has a brilliant team in Jun Kimura, Richard Godwin-Austen, Theodore Munsat and the chairpersons of many committees, particularly Robert Daroff. They are all helping WFN to become a vibrant organization with its tentacles spread in 84 countries and with the aim of forging links between the WFN and other global neurological associations. The President's 1999 Annual Report reflects the on-going programmes and projects. Paucity of space does not allow the reports from the other members of the Management Committee to be included in this issue of *World Neurology*: they will appear in the next issue so that members may see for themselves how their chosen representatives are handling the affairs of WFN.

Reports of some of the Research Groups are included in this issue. Our collective congratulations to them for their excellent performance. It is hoped that those other Research Groups that are relatively dormant will follow their example and that we may have an opportunity to read about their enhanced activities in future issues of *World Neurology*.

Our appreciation and congratulations go to Allen Hauser, who has enlightened us about the magnitude of epilepsy in the world, a major public health problem in developing countries where only scanty epidemiological data are available. WFN is pursuing a number of programmes under which the neurological centres of developed nations can help their counterparts in developing countries, and one of the aims must surely be to collect data on epilepsy and other neurological diseases. It also presents a challenge for developing nations themselves to generate statistical data on neurological ailments.

Finally I would like to invite the manufacturers of pharmaceuticals and medical equipment to sponsor *World Neurology*. This will deliver maximum exposure of their products as WFN is the only neurological publication mailed quarterly to nearly every neurologist in the world.



Jagjit S. Chopra
Editor-in-Chief

cont. from page 1:

the Organizing Committee of the X Pan-American Congress of Neurology particularly Gustavo Pradilla, President; Maria Isabel Medina, Secretary; Jaime Toro, Chairman of the Scientific Committee; Eugenia Espinosa, Chairman of the Financial Committee; Germán Pérez, Treasurer and Jairo Pareja, Local Organising Committee. At the conclusion of the Congress, the last this century, Dr. Pradilla gave his thanks to the WFN for its endorsement, to the neurologists from America, Europe and Asia for their participation, and to the national and international pharmaceutical industry for its support. Finally he said that he believed meetings like this allow and fulfil an ancient Indian prophecy: "When the Eagle of the North flies with the Condor of the South, the spirit of the land will be awakened"

Gustavo Pradilla
President, Pan-American Congress

THE 20th SALZBURG CONFERENCE

Organized by the WFN Research Group on Organization and Delivery of Neurological Services

November 3–6, 1999, Taipei, Taiwan

The highly traditional Salzburg Conference of the World Federation of Neurology is, besides the Princeton Conference, one of the oldest to have co-ordinated international research in cerebrovascular disease. The 20th Salzburg Conference of WFN was held under the chairmanship of Prof. TI-Kai Lee, Taipei. In his opening address, Prof. James F. Toole, WFN President, admired the very important contributions of the Salzburg Conference to the development of stroke medicine. The first session was devoted to risk for stroke and

was followed by genetic progress, epidemiology of stroke, hemorrhagic stroke, apoptosis, neuroimaging for the detection of pathophysiologic changes in stroke, heart-brain interaction in cerebrovascular disease, neuroprotection and treatment of stroke; various other important topics were also dealt with. Prominent speakers were H. Lechner (Austria); C. Loob and C. Gandilfo (Italy); T.A.A. Rankusuma (Indonesia); W.D. Helse and K. A. Hoesmann (Germany); F. Gotoh, A. Koto, Y. Shinohara, B. Uchiyama and Y. Fukuuchi (Japan); A. Czlonkowska (Poland); B.B. Johnson and V. Zbrornlkove, (Sweden); J. Toole, F. Yatsu, C.Y. Hsu and J. St. Mayar (USA), all of whom contributed to the great success of the meeting. During the conference many interesting and informative studies were reported. An ongoing trial on vitamin intervention for stroke prevention showed promising effects. Ac-



The 10th AOCN, from left to right: Dr. James F. Toole, Dr. Amado San Luis, Dr. Jean Aicardi.

According to the result of platelet aggregation study, the use of antiplatelet agents in asymptomatic cerebral infarction patients may prevent occurrence of symptomatic infarction. Preventing stroke inhibiting atherogenesis through smooth muscle cell proliferation has clinical potentials. Deletion polymorphism of ACE gene did not play an important role in the pathogenesis of CVD in the Chinese living in Taiwan. Weighted stroke scale (JSS) is not only useful for quantification of the severity of stroke but also reliable for assessment of the drug effect. Suppression of protein synthesis is important for infarct evolution after transient or permanent occlusion; however, apoptosis is not a major contributor to this process. Preventive effect on secondary ischaemic stroke was not different between the ticlopidine 100 mg bid and 500 mg bid group, but the in-

cidence of side effects especially neutropenia was significantly higher in the ticlopidine 250 mg bid group. The higher 14 days case fatality in Poland may be caused by high prevalence of post stroke cardiac diseases and insufficient care in the early stage of stroke. A successful and highly attended satellite meeting also took place. The first session of the satellite meeting consisted of lectures given by H. Lechner, Austria, on "Up to Date Possibilities of Primary Prevention of Stroke", followed by F. Gotoh, Japan, on "Therapeutic Windows in Acute Ischaemic Stroke". The second session was "Meet the Experts". The aim of "Meet the Experts" was to explore the controversial issues in the treatment of stroke.

*Prof. Helmut Lechner,
Graz, Austria*

10th ASIAN AND OCEANIAN CONGRESS OF NEUROLOGY A SUCCESS

On January 22–26, 2000, the 39-year-old Asian Oceanian Association of Neurology held its 10th Congress at the Philippine International Convention Center in Manila. The Congress was graciously hosted and organized by the Philippine Neurological Society. 560 participants from 26 countries attended this congress. There were 4 Plenary Lectures, 5 Special Lectures, 5 Satellite Symposia, 2 Breakfast Lectures, and 4 Simultaneous Symposia daily. 123 free papers were chosen. WFN President Dr. James F. Toole was the special guest of the congress and delivered the traditional opening plenary lecture on "Advances in Stroke". 23 delegates from 13 countries participated in the National Delegates Meeting. Two former AOCN Presidents and WFN Vice President, Dr. Jun Kimura served as advisers and resource persons. Discussions in the meeting focused on organizational issues. The delegates unanimously agreed to create an ad hoc committee on amendment to the 1961 statute. Dr. Amado M. San Luis, the 10th AOCN President, was chosen to chair the committee. The bidding for the right to host the 11th AOCN was won by the Clinical Neuroscience Society of Singapore headed by Dr. Christopher Chen. The very busy scientific program was tempered by the colourful fiesta atmosphere of the Filipiniana Night where the inherent love of the Filipinos for dance and songs was showcased by the world renowned Bayanihan Dance Troupe.

*Dr. Amado M. San Luis
Manila, Philippines*

ALL ROUND PROGRESS IN WFN

Annual Report of the President for 1999

We are now at the midpoint of our administration, having spent the first two years reorganizing and making plans for implementation of programs commencing during the year 2000. These will be detailed by each of your officers in their respective reports, which will appear in a subsequent issue.

I am very pleased to report that the Management Committee is a smoothly working, knowledgeable, and innovative group of experts, each of whom brings special

skills for group consideration and decision making. First Vice President Kimura has labored hard and long with his Committee to put together, with legal assistance, our Constitution and Bye-Laws by which a registered charity under United Kingdom law can function as a worldwide organization. Theodore Munsat, Chairman of the Research Committee, has considered recommendations from all of the Research Groups and has, with the concurrence of the Management Committee (Executive Committee) implemented international programs of continuing education using, as a model, that of the Amer-

ican Academy of Neurology's *Continuum*. Furthermore, he has stimulated the formation of new research groups and new educational methods for the WFN. Secretary-Treasurer Godwin-Austen has provided steady guidance and fiscal responsibility to be sure that the WFN neither exceeds its budgets nor neglects the ultimate purpose of the WFN, which is to provide programs for its membership. All of us have utilized the Secretariat, with Mr. Keith Newton and Miss Susan Bilger, for implementation of the overall program. Moreover, the Secretariat, Dr. Richard Godwin-Austen, and Dr. Ted Munsat, have



Dr. James F. Toole, MD
President WFN

worked extensively with the Coordinating Committee for the WCN 2001 in London and will describe this in their own sections.

As your President, this year has been one of extensive travel, as I attempt, Magellan-like, to cover the length and breadth of the world. I find it difficult to travel to all of the locations where I have been invited to attend as the presiding officer of our world organization. Because many overlap in time, I have had to choose among opportunities and have elected to make the WFN known in places which have not previously had such interaction. All of this is costly in time, effort, and money. I have interacted with relevant organizations, particularly the WHO, Non-Governmental Organizations, and the neurological societies such as Taiwan, Hong Kong, and People's Republic of China, in an effort to foster relationships among them, all of whom wish to work together.

One of the main goals of this administration is to begin a "trickle down" effort, so that not all of the administration and work of the WFN is done from the central administration but is done regionally. The first and most important such effort is the very successful rejuvenation of *World Neurology* by Dr. Jagjit S. Chopra of Chandigarh, India, and Elsevier in Amsterdam through Dr. Tatjana Fischer-Driessen, negotiated by the Publications Committee Chair, Dr. Robert Daroff. They have produced a magnificent first issue of *World Neurology*, which is now available not only in hard copy but also on the recently devised WFN website which can be accessed at www.wfneurology.org and then click on "Publications". In the future, Editor Dr. Chopra and Webmaster Dr. B. Todd Troost will accept selected copy from international, regional, and, sometimes, local neurological networks. We already have 44 e-mail addresses and are increasing that number via a variety of mechanisms and we invite all of our read-

ers to submit their e-mail addresses to our master communication list at the Secretariat in the Chandos Street office in London. Our excellent website and newsletter will, in the future, be our most important communication network and I congratulate Drs. Chopra, Troost, and Lisak for their successes in bringing our *Journal of Neurological Sciences*, *World Neurology*, and our website into such successful condition. The newsletter goes to 24,000 members as hard copy. As time goes on, increasing numbers will be shifted to e-mail, saving mailing while being a more rapid interactive system.

I have formed a World Federation of Neurology Foundation in the United States to take advantage of U.S. tax laws which encourage charitable donations. For those who would like such opportunities, this is a marvelous way to help neurology research and education worldwide.

In April, I attended the Japanese Stroke Society meeting and the International Stroke Society Regional Meeting in Yokohama, under the leadership of Dr. Yukito Shinohara. This was enormously successful and, because I am President-Elect of the International Stroke Society, the WFN and ISS have the opportunity to work closely together for programs of mutual benefit. I am encouraging Stroke Fellowships and I have, at this time, a Fellow from the nation of Georgia, Eteri Bibileishvili, and, until recently, Roland Veltkamp from Munich, Germany. Fellowships should be increased in number and locations and the interchange vastly increased for the dissemination of special neurological skills and culture.

I also attended a conference of the World Health Organization in Geneva, on the interface between neurology and psychiatry in April 1999 and, thereafter, the meeting of the Non-Governmental Organizations co-operating with the WHO on December 13, 1999. We are making progress in achieving a name change and recognition of nervous system, stroke, and brain function within the WHO framework.

I have been using my position in the WFN to bring to the attention of the public, the fact that disability in world leaders can lead to enormous tragedies because of neurological conditions and will, during 2000, begin to develop means by which to bring about in depth global consideration of this problem. The First International Conference on Vascular Dementia was held in Geneva, Switzerland under the auspices of Natan Bornstein and Amos Korczyn. This extraordinarily successful meeting will be repeated and will, in my opinion, become an extremely important component of stroke and dementia, about which there will be a greater consideration during year 2000.

I have taken steps to develop an archive for the preservation of the transactions and memorabilia of the WFN and its regional offices from its inception in 1957. The Wellcome Foundation is very interested in our organization and Dr Christopher Gardner-Thorpe has agreed to be responsible for seeing that our treasures are carefully accessed into a permanent location.

My wife and I attended the 31st Danube Symposium coordinated in Szeged, Hungary, following which we went to the



Dr. James F. Toole standing with his wife Patricia in the centre. Also seen are other senior neurologists including Dr. Athasit Vejijava and Dr. Prosop Ratanakorn (3rd and 4th from left).

Alpsbach meeting in the Austrian Tyrol with Dr. Florian Deisenhamner and Dr. Franz Aichner, then the Polish Neurological Society in Lublin with Dr. Zbigniew Stelmasiak and Anna Czlonkowska, and ended our tour in Lisbon, Portugal with the EFNS.

The 20th Salzburg Conference on CVD was held in Taipei, under the leadership of Dr. T. K. Lee. This was a huge success, as was the meeting of the Research Group on Neurosonology with President Gerhard von Reutern, Drs. Kurt Niederkorn,

Charles Tegeler and Shan-Jin Ryu. While there, I, as President of the WFN, convened a meeting of representatives of Neurology from Taiwan, People's Republic of China, and Hong Kong, to seek resolution of problems regarding membership of all three.

Thereafter, Patricia, Charles Tegeler, and I, went to an outstanding meeting in Bangkok, Thailand, coordinated by Dr. Disya Ratanakorn whose father, Dr. Prasop Ratanakorn, is the third neurologist ever to have practiced in that country. Of interest

is the fact that Professor Ratanakorn and I studied together at the University of Pennsylvania in the 1950's, so that we have common roots in the field of neurology (see photograph). Thereafter, before the WFN Management Committee meeting in December, I presented material on Disability in U. S. Presidents to the Nigel Colley Society in Nottingham, with Dr. Richard Godwin-Austen presiding.

James F. Toole, M.D.
President WFN

EPIDEMIOLOGY OF EPILEPSY

Introduction

Epidemiology is the study of disease distribution, determinants, and natural history in total populations. Epidemiological studies provide a comprehensive picture of the characteristics of those affected, and predictors of the course of the condition. There are widely varying definitions of epilepsy in contemporary studies. One has to consider definitions used when making comparisons of exact numbers across diverse geographic areas but trends are consistent.

Incidence

Incidence is a measure of newly occurring epilepsy over time. The incidence of epilepsy (recurrent unprovoked seizures) in developed countries (Europe and the United States) is about 50 per 100,000 population each year. Incidence increases as expected if more liberal definitions are used — about 70 if all unprovoked seizures are included and about 100 if acute symptomatic seizures are included. When comparable definitions are used, the incidence of epilepsy is between 50 and 100% greater in developing countries. For example, the incidence of epilepsy in Chile is over 100, and in rural Ecuador, the incidence for all unprovoked seizures is as high as 170.

Gender

Regardless of definition and regardless of study area (developed and developing countries), there is a higher incidence in males. Maleness seems a risk factor for epilepsy even if one excludes symptomatic cases.

Age

Studies in developed countries demonstrate a high incidence of epilepsy in the first year of life and in those over age 65 years of age. Age specific incidence is dramatically different in developing coun-

tries where incidence is highest in children and teenagers, and few if any cases of epilepsy are identified in the elderly. In developed countries, the age specific patterns of incidence have changed over time. Incidence in children in contemporary studies is half of that reported 50 years ago. This reduction is largely unexplained although immunization programs and resultant reduction in childhood infections may explain part of the decrease. This fall is compensated by a doubling of the incidence of epilepsy in those over age 65 largely due to better survivorship following stroke. No reliable time trend data are available from developing countries.

Seizure type

In developed countries slightly more than half of new onset seizures are partial in onset. In studies from developing countries, generalized epilepsies tend to predominate. Less complete evaluation of new cases in developing countries may lead to misclassification of secondarily generalized seizures as generalized from onset, but the differences could also be related to the differences in age distribution of incidence cases.

Etiology

In developed and developing countries, the majority of new cases of epilepsy (60 to 70%) are of unknown cause. The most common identified cause in developed countries is cerebrovascular disease followed by head injury and Alzheimer's disease. In developing countries, the most common identified cause is infectious disease — particularly cysticercosis.

Syndrome

The epilepsy syndrome classification has been used in several of the more recent studies in developing countries. Only a small proportion of cases can be categorized into specific syndromes. Benign ro-

landic epilepsy accounts for about 15% of epilepsy in childhood, West syndrome for about half of all epilepsy with onset in the first year of life. Juvenile myoclonic epilepsy and pyknolepsy each account for about 3% of new onset epilepsy. There is little information regarding syndrome distribution in developing countries.

Prevalence

Prevalence, a measure of the number of cases in the population at a particular point in time, has value for assessment of health care needs. Differing definitions preclude direct comparison of prevalence across studies, but trends are consistent. In developed countries, prevalence of active epilepsy (generally defined as current seizures and taking anti-seizure medication) ranges from 4 to 7 per 1000. Prevalence is higher in males and increases with advancing age. About 1/3 of prevalent cases are refractory to treatment, about 75% have no known cause and about 60% experience partial seizures. Prevalence has generally been reported to be higher in developing countries although the excess is less than that expected based upon the discrepancy in incidence. In developing countries, most studies identify few cases after the age of 40. This lack of cases in the oldest age groups may be related to incomplete identification related to recall bias or stigma, but there is also concern that the paucity of cases is related to premature mortality.

What are the causes of epilepsy?

A major focus of epidemiology is prevention. To address potential for prevention, we must understand potential causes. From a classical standpoint, causes may be divided into 3 groups for whom mechanisms and prognosis are different.

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Factors present at birth: cerebral palsy (CP)/mental retardation (MR) and migration disorders

In developed and developing countries, MR and/or CP account for about 10% of all epilepsy in children. Conversely, about 10% of people with cerebral palsy alone will have epilepsy. Epilepsy also occurs in about 10% of cases with MR (I.Q. < 70). When the two factors coexist, about 50% will develop epilepsy. The majority of cases with CP have no identified cause. About half of cases of MR demonstrate chromosomal or genetic abnormalities. The remainder generally has no obvious risk factors.

At the extreme (lissencephaly, for example), migration disorders and epilepsy are highly correlated. With improved imaging, small areas of cortical dysplasia are being identified in many cases. Unfortunately, the population frequency of such anomalies remains unknown and the level of risk uncertain.

Genetics

Genetic factors are important in the development of epilepsy but the mechanisms are complex. There are several genes that are specific to epilepsy, and there are additional chromosomal localizations awaiting gene identification. Interestingly, none fall into the category of presumed genetic conditions characterized by the "Idiopathic" Epilepsies which to date have been

considered genetic in origin. Efforts at the identification of single gene disorders are important, but seem unlikely to further explain a substantial proportion of cases in the near future.

Postnatally acquired neurologic insults

Bacterial and viral CNS infections are well-recognized antecedents of epilepsy. These conditions occur primarily in children. Epilepsy following these conditions can develop at any age, but most cases of epilepsy will occur within 5 years of the infection. CNS infection accounts for 3 to 5% of all new epilepsy in developed countries. In areas where parasitic disease such as cysticercosis is endemic, a substantial proportion of epilepsy is attributed to this condition.

In developed countries, brain trauma accounts for about 5% of all cases of epilepsy. Given equal severity of trauma, the risk of epilepsy is higher in the elderly than in younger age groups. About 10% of survivors of severe brain injury will develop epilepsy.

In developed countries, cerebrovascular disease is the most frequently identified antecedent of epilepsy accounting for 10 to 15% of all new cases. In the oldest age groups stroke accounts for 30 to 40% of all newly occurring cases of epilepsy. About 15% of survivors of a stroke will develop epilepsy within 5 years following a first clinically identified cerebrovascular insult, although the risk to develop epilepsy remains significantly elevated above that expected for at least 20 years following initial stroke.

Chronic alcohol abuse has not been considered to be a major etiologic factor in most studies of epilepsy. In addition to withdrawal seizures, individuals who drink heavily on a chronic basis have had a 3-fold increase in risk for epilepsy. Alcohol abuse is the sole antecedent identified among 25% of adults with newly diagnosed epilepsy in developed countries.

Progressive conditions

Half of people with brain tumors experience seizures as a presenting symptom and about 5% of all cases can be attributed to CNS neoplasms. A small proportion of people with longstanding epilepsy have brain tumors identified in the course of the illness. Epilepsy or its treatment may increase risk for brain tumors, but it seems more likely that previously unidentified lesions are the culprits.

Seizures and myoclonus are a hallmark of the atypical and slow virus infections such

as subacute sclerosing panencephalitis or Creutzfeldt-Jacob disease. People with AIDS are at increased risk for seizures because of associated CNS infection and to metabolic disturbances but are also at increased risk for epilepsy. AIDS account for only a small proportion of people with epilepsy in developed countries, but this may become important in Africa where the prevalence of AIDS is high.

Dementing illness, predominantly Alzheimer's disease (AD) is associated with a high risk for seizures. Roughly 15% of AD patients can be expected to develop epilepsy. AD accounts for about 15% of all newly occurring epilepsy in those over age 65.

Multiple sclerosis, a disease of white matter, is associated with a 3-fold increase in risk for epilepsy.

There is an array of progressive metabolic disorders seen predominantly in childhood such as Tay-Sachs disease or Gaucher disease which account for less than 1% of all epilepsy.

Co-morbid factors with epilepsy: are they also risk factors?

There are a number of conditions that co-exist with epilepsy. Epidemiological studies have begun to evaluate causal direction and level of risk for these factors. There are several studies identifying an association between epilepsy and migraine. Childhood migraine is associated with a 3-fold increased risk for epilepsy.

Febrile seizures are associated with a 6-fold increase in risk for epilepsy. Epidemiological evidence does not support a *causal* association between febrile convulsions and epilepsy. An association between epilepsy and depression has long been recognized. It has been assumed that a depressed state is related to epilepsy or its treatment. Epidemiological studies demonstrate that people with depression have a 3-7-fold increase in risk for epilepsy. Medical conditions such as sustained hypertension or asthma are associated with an increased risk for epilepsy. The mechanisms require further explanation.

Prognosis: remission and mortality

Epidemiological studies following people from first diagnosis have consistently shown that the majority go into remission. This seem true in both developed and developing countries.

People with epilepsy experience excess

GLAXO WELLCOME JUNIOR TRAVELLING FELLOWSHIPS

Glaxo Wellcome are again generously providing funding for up to 10 Junior Travelling Fellowships – each worth up to £1,000 – for young neurologists from developing countries to attend WFN sponsored congresses in 2000. Applicants should hold a post not above that of Associate Professor and should not be over the age of 42 years. Applications (four clear copies of CV, a letter of recommendation from Head of Department, a covering letter giving name and date of congress for which travel funds are sought and an estimate of expenses) must be sent to the WFN London Office to arrive by 30 April 2000.

mortality when compared with the general population. In incidence cohorts, overall mortality has been increased by a factor of 3 to 4 over that expected in a population matched by age, gender and time period. Mortality is increased to a greater extent in studies of prevalence cases. In people with epilepsy of unknown cause, mortality is increased only by 30% when compared to that expected in an age/gender/time period population. There is no increase in mortality among individuals with a single unprovoked seizure. Excess mortality is greater in men than in women, and is invariably highest in the first years after diagnosis. Cause specific mortality is increased for respiratory disease, accidents, vascular diseases, and suicide.

People with epilepsy have an increased risk to die suddenly and unexpectedly,

SUDEP is a condition that occurs with a low frequency in incidence cohorts of epilepsy (4 to 5/10,000 per year), but is seen with increasing frequency proportionately to increasing seizure frequency or severity. In people in clinical trials, it will occur with a frequency of 3 to 5/1,000 per year. In surgical candidates or in surgical failures, the frequency may be 1% per year or more. SUDEP is increased in those with epilepsy of long duration and with high seizure frequency. It is still unclear whether it is predominantly attributable to cardiac or to pulmonary dysfunction.

Conclusions

Epidemiological studies document the burden of epilepsy internationally but also provide evidence of a generally favorable prognosis in terms of seizure control and remission. There are a number of areas

which deserve further exploration in the next decade and which can further efforts for prevention. We must better understand the reasons for differences in the incidence in developed versus developing countries. We must better understand risk factors, particularly those other than the "classical" neurologic insults. We need to further clarify the role of genetic factors in the risk for epilepsy. We need to better understand the increased risk for mortality which seems to be associated with chronic epilepsy and which may in part explain the differences in incidence and prevalence in the developing world.



W. Allen Hauser

Professor of Neurology and Public Health
College of Physicians and Surgeons
Columbia University

NEWS

Collective Fight Against Multiple Sclerosis

The Latin-American Committee for Treatment and Research in MS (LACTRIMS) was created in Cartagena de Indias, Colombia, on October 16th 1999. It has been created to provide answers to many unanswered questions, such as the prevalence of MS in the 39 Latin-American countries, and to help in the establishment of the right diagnosis. The goals of LACTRIMS are as follows: (a) To promote education, research and scientific interchange on MS and related diseases among Latin-American countries. (b) To improve the quality of basic and clinical research in MS and related diseases. (c) To organize a Congress for neurologists, clinical and basic researchers in areas related to MS as well as other health professionals and persons with MS. (d) To promote the realization of realistic epidemiological studies in the different regions. (e) To propose strict and realistic diagnostic and therapeutic criteria

for the different regions. (f) To promote the development of regional MS societies under the IFMSS guidelines. (g) To promote relations with international forums of scientific activity, such as ECTRIMS, ACTRIMS and others. (h) To publish a Newsletter, in Spanish, every fourth month.

The elected current President of LACTRIMS until 2001 is Dr. Leonor Gold from Argentina and the Secretary General is Dr. Edgardo Cristiano also from Argentina. The LACTRIMS have established an office; Guise 1870, 1425 Buenos Aires Capital Federal, Argentina.
E-mail: cristiano@arnet.com.ar

WFN News

All Research Group meetings that wish to operate under the WFN label must be approved by the WFN Continuing Education Committee. Approval is a simple procedure and takes about two weeks. The programme and list of tentative speakers should be forwarded as early as possible to Mr.Keith Newton, WFN Administrator,

12 Chandos Street, London W1M 9DE, U.K. Tel: +44 171 323 4011, Fax: +44 171 323 4012, E-mail:WFNLondon@aol.com.

Once the meeting is approved, the organizers are allowed to include the following statement in their publicity literature.

"This programme is endorsed by the World Federation of Neurology. Federation members and all interested neurologists are encouraged to attend."

Theodore L. Munsat, M.D.
Chairman, WFN Research Committee

WFN Communications

Reports from the Management Committee's meetings and regular monthly telephone conference calls are being routinely distributed by e-mail, fax and airmail to all Delegates and will be posted on the WFN website. E-mail and fax are vital to modern international organisations like the WFN. All members are encouraged to acquire the technology if at all possible and to notify the London Office of their

e-mail address/fax number if they have not already done so.

New ALS Peer-Reviewed Quarterly Journal

A new quarterly journal – *Amyotrophic Lateral Sclerosis and Other Motor Neuron Disorders* – has been launched covering all aspects of the diagnosis and management of ALS (Lou Gehrig's disease), primary lateral sclerosis, spinal muscular atrophy and related motor neurone disorders. The journal's aim is to disseminate information on new developments in the management of motor neurone diseases, and enhance awareness of these devastating and often under-recognised disorders. Published by Martin Dunitz Publishers and edited by Professor Michael Swash, the journal will be the official publication of the WFN Motor Neuron Diseases Research Group.

The first issue appeared in November, to coincide with the MND/ALS international symposium. Future issues are scheduled to appear in March, June, September and December.

Each issue will feature reviews, original research, case reports and other short reports on all aspects of ALS and related diseases, including new treatments, basic science, clinical trials, care issues, ethics and legal issues and reports from ALS centres.

Information on subscribing and manuscript submission is available from Ian Mellor, Journals Manager, Martin Dunitz Ltd, The Livery House, 7-9 Pratt Street, London NW1 0AE, UK. Telephone: +44 171 482 2202; Fax +44 171 482 7088; E-mail: als@dunitzco.globalnet.co.uk; Website: <http://www.dunitz.co.uk/als.htm>

The WFN Continuum Programme

Thanks to the American Academy of Neurology, the WFN has acquired a stock of past issues of their Continuing Education programme, *CONTINUUM* (Part A). Courses in Epilepsy, Parkinson's Disease, Behavioural Neurology, Geriatric Neurology and Neuroscience for the Clinician have been received. The intention is to make these available to neurologists in regions of the world with scarce resources as part of the WFN's *Continuum* Study Groups programme. The Continuing Education Committee will determine ways of ensuring a fair distribution to the most needy countries. Distribution to Eastern Europe will be carried out in conjunction with EFNS.

Continuing Education Committee – New Sub-Committees

Continuing Education Committee Chairman, Dr Theodore Munsat, has established a number of sub-committees to address the various goals of the CEC in a more effective manner. The Residency Training Programmes sub-committee, under the Chairmanship of Dr Alberto Portera-Sanchez, will work to help establish neurology training programmes in areas of need, similar to the programme that has already been introduced in Honduras. The CME Accreditation sub-committee (Chairman: Dr Marco Medina) is exploring the feasibility of developing a WFN policy on CME accreditation. Dr Munsat himself will lead the *Continuum* Study Groups sub-committee as it works to expand the WFN programme established last year. He will also take on the Chairmanship of a WFN Seminars in Neurology sub-committee with the same goal. The first issue in this series will be published next summer. The formal endorsement by the WFN of international meetings will be devolved to a sub-committee chaired by Professor James Temlett from South Africa. And the Neurology International Partnership Programme, created by Dr Donald Silberberg and Dr Pauline Munro, also acquires CEC sub-committee status under Dr Silberberg's chairmanship.

Council of Delegates Meeting 2000

In 2001 the WFN will finalise its incorporation as a limited company under English law and will legally be required to hold meetings of its membership (the Council of Delegates) every year instead of biennially as in the past. In anticipation of this change, Delegates are being invited to attend a Council meeting during the Annual Meeting of the American Academy of Neurology in San Diego in April 2000. At the time of writing, some 27 national delegates have indicated their intention to be in California for the AAN Meeting, making it feasible to hold a Delegates' Council to discuss a wide range of issues regardless of whether a formal quorum for the meeting is attained. This face-to-face gathering on an annual basis will help further to improve communications between the WFN officers, administration and membership that is so vital for the health of the organisation.

Zambia Project

Through its Continuing Education Committee and Management Committee, the WFN is supporting the work of Dr Gretchen Birbeck, Robert Wood Johnson Clinical

Scholar at UCLA. Dr Birbeck is developing a teaching manual for use by paramedical professionals (Clinical Officers) in developing countries. COs are grossly undereducated in neurological problems and may be receiving a great deal of misinformation. Dr Birbeck will initially work with COs in Zambia but the hope is that this study will serve as a pilot for other countries and eventually be applicable globally. Further support for the later stages of Dr Birbeck's project will feature in the fund-raising programme that the WFN is beginning to develop.

Fund-Raising in USA

WFN President, Dr James Toole, has arranged for the Federation to be incorporated in the USA as a not-for-profit organisation to undertake fund-raising for specific strategic goals. Priorities will be determined and, with the aid of professional consultants, a plan of action will be devised to approach wealthy benefactors, corporate and individual, known to have interests in global health problems.

Membership

The newest members of the WFN are Cyprus and Qatar as reported in the last issue. An application from Syria is being given preliminary consideration by the Steering Committee and Nepal too has expressed an interest in joining. This is encouraging for the future health of the organisation but there is also a need to adopt a more proactive policy with regard to membership. With this in mind, a Membership Committee is to be formed with the task of encouraging other countries that are not yet WFN members to join. Suggestions for membership of the Committee are invited. It will be important to identify a person in each country able and willing to provide information and assistance.

Liaison with the World Health Organization

The WFN is attempting to be represented at as many WHO regional meetings as possible, through attendance by locally based WFN members. They are provided with a standard WFN briefing document to use when making a presentation and it is hoped that this will give neurology a higher, more appropriate profile within the WHO committee and organisational structures. Dr Francesco Paladin from the International School of the Neurosciences in Venice, Italy was the first to represent the WFN in this way when he attended the WHO European Regional meeting Flor-

ence. He is to be thanked and congratulated for his efforts on behalf of the WFN.

Books for Developing Countries

The London Office of the WFN Secretariat

keeps a stock of neurological textbooks that have been received for review in *World Neurology* and can be forwarded to institutional/departmental libraries in developing countries. A list is available on application to the Administrator. If you are

interested in any of the books and can either collect them when visiting London or pay for the mailing costs (postage can be expensive) please let us know.

NEW WFN RESEARCH GROUP

The Chairman, Dr Theodore Munsat, and members of the WFN Research Committee have given approval for the creation of a new WFN Research Group on 'Palliative Care in Neurology'. There is a need for better management of patients with progressive and incurable neurological disorders, particularly at the end of life. Palliative Care is now recognised as a *bona fide* pursuit in neurology. Fifty neurologists from thirteen different countries under the convenorship of Dr Raymond Voltz have been instrumental in organising and co-ordinating their activities. So far there has been no international society in either

neurology or palliative care with a "working group" specifically aimed at the questions concerning palliative care in neurology. The aims of this new Research Group are as follows

- to provide a forum for exchange of experience
- to initiate and co-ordinate research projects
- to help formulate guidelines
- to provide a background for national 'political' initiatives in order to improve the training and education of neurologists in the field of palliative care

Those who wish to be associated with this Research Group should contact Dr Voltz at the following address:

Dr. Raymond D. Voltz
Institute of Clinical Neuroimmunology,
Dept of Neurology, Klinikum Grosshadern, D-81366 München, Germany
Tel: +49-89-7095-4783/-4780 or
+49-89-7095-4439
Fax: +49-89-7095-4782 or
+49-89-7095-7435
E-mail: RKCVoltz@compuserve.com
raymond.voltz@nro.med.uni-muenchen.de

WFN RESEARCH GROUP REPORTS

Research Group on Ataxia

A satellite meeting on Inherited Ataxias was held on October 13 and 14, 1999, immediately after the ANA meeting at the Seattle Westin. Discussions were held on the Molecular Pathogenesis of Friedrich's ataxia and the role of frataxin, the iron storage hypothesis in FA, understanding of polyglutamine disorders, the role of intranuclear processes in these diseases, and the role of channel mutations in episodic ataxia. Discussions were also held on the current status of transgenic models and current efforts at therapy, and on issues regarding genetic testing. The list of important speakers included M. Pandolfo (Montreal), Dan Geschwind (UCLA), M. Cossec (France), S. H. Subramony (Mississippi), Harry Orr (Minnesota), Stefan Pulst (Cedars Sinai), Hank Paulson (Iowa), Laura Ranum (Minnesota), Chris Gomez (Minnesota), Arnulf Koeppen (Albany), M. Hallett (NIH), M. Nance (Minnesota), T. Bird (Seattle) R. Rosenberg (Dallas) and R. Currier (Mississippi).

S.H. Subramony
Secretary

Research Group on Neuroimaging

The Research Group on Neuroimaging held a formal meeting on September 18, 1997, at the World Congress of Neurology in Buenos Aires. Dr. Masdeu was appointed

Research Group Chairman. The European component of the Research Group played a major role in the publication of a landmark article in 1998 on the status of neuroimaging at academic institutions in Europe (European Federation of Neurological Societies Task Force on Neuroimaging, *Neuroimaging in European academic neurology. Eur J Neurol* 1998; 5, 5-15). A similar paper on Neuroimaging training in the US had been published a few months before (Masdeu JC, American Academy of Neurology neuroimaging training guidelines. The AAN Workshop on Neuroimaging Training. *Neurology* 1997; 49, 1738-40). A survey of the role of neuroimaging training and practice amongst US neurologists was published in 1999 (Masdeu JC, What do neurologists think about their role in neuroimaging training and practice? *J Neuroimaging* 1999; 9, 39-42). Meeting programmatic goal #3 (see Future Plans below), the AAN Neuroimaging Training guidelines were mailed to all US residency-training program directors, and were posted prominently on the American Academy of Neurology Web site (<http://www.aan.com>).

Members of the Research Group participated in and contributed to the following international neuroimaging meetings:

- i. 1998 - 21st Annual Meeting of the American Society of Neuroimaging in Orlando, Florida, USA

- ii. 1998 - 4th International Conference on Functional Mapping of the Human Brain, Montreal, Canada
- iii. 1999 - 22nd Annual Meeting of the American Society of Neuroimaging in Phoenix, AZ, USA
- iv. 1999 - 4th International Conference on Functional Mapping of the Human Brain, Düsseldorf, Germany

A web-site has been created for members of the Research Group to list their resources and current projects. The URL is <http://neurology.nymc.edu/nrgwfn/>

FUTURE PLANS

1. The neurologists currently involved in functional neuroimaging, and particularly in functional MRI and PET, should be invited to participate more actively in the Research Group.
2. Encourage a wider participation of academic neuroimagers in the Research Group.
3. The role of neurologists as neuroimagers should be encouraged.
4. Databases of research grant opportunities on a regional basis should be made available on the Internet.
5. Databases of teaching cases, encompassing as wide a variety of disorders as possible, should be fostered. Excellent examples already on-line include the Whole Brain Atlas (<http://www.med.harvard.edu/AANIB/home.html>), spearheaded by Dr. Keith Johnson, and the Rennes Image Base (<http://>

www.med.univ-rennes1.fr/cerf/iconocerf/N/).

6. More members of the Research Group should be involved in its management.

The Chairman of the WFN Research Committee, Dr Munsat, has requested that each Research Group submit a proposal for a research project as part of a WFN Initiative Against Brain Disorders. The project should be international in scope and, if possible, target neurological needs in developing countries. The objects of the Initiative are:

- i. To apply existing knowledge of brain function, malfunction and treatment.
- ii. To stimulate new research in the basic and applied neurosciences.
- iii. To raise the public's awareness of the importance of brain disorders.

Neuroimaging RG members are asked to contribute suggestions

Joseph C. Masdeu

President RG, Department of Neurology, New York Medical College, Valhalla, NY 10595, USA

Research Group on Dementia

Potential aims of the Research Group under consideration are:

- i. Become a sounding board for unusual diseases (VSE, Kuru, etc.)
- ii. Develop lecture panels and areas of expertise for developing countries.
- iii. Foster exchange and contacts among investigators from different countries.
- iv. Identify diseases of importance throughout the world for the World Federation of Neurology.

It was discussed which educational programs the group should support. Should they be disease specific, or should they be addressed to developing countries? It was felt that some of the neurological diseases discussed at most meetings are not specific for developing countries. The example of a successful development of the first Central American (Honduras) neurological training program was reported. The reputation and visibility of the WFN was instrumental for the development of such a program. It was further suggested that the WFN cater to the non-US contingents of neurologists who travel extensively for their education such as at American Academy of Neurology meetings. The group recently organized an International Brainstorming Conference in progressive supranuclear palsy and related disorders.

ALZHEIMER'S DISEASE INTERNATIONAL

15th International Conference, Johannesburg, South Africa, 16–18 September 1999

Symposium: "From Epidemiology and Genetics to Pharmacological Interventions in Dementia". Speakers and delegates from many countries attended. Further information on the ADI Meeting can be obtained from its web-site at <http://www.globalconf.co.za/adi99>. The next ADI Meetings are scheduled as: 2000: Washington, DC; 2001: New Zealand; 2002: Spain; 2003: Venezuela.

Luigi Amaducci Travel Fellowship. This Fellowship, created at the initiative of Dr. Piero Antuono, Chair of the Group, will soon be in a position to provide awards. Bayer has committed \$ 6000 over 5 years.

WCN 2001

We are delighted to report that dementia will be one of the main themes at the World Congress of Neurology 2001 in London.



François Boller
Secretary Treasurer

Research Group on Neurogenetics (1989–1999)

The Neurogenetics Research Group was founded at the World Congress of Neurology held in New Delhi in 1989. The goals of the group were to provide a forum where neurologists interested in genetics could share research results, organize scientific meetings in the field of neurogenetics, initiate collaborative research studies, and develop educational programs in neurogenetics with an emphasis on molecular neurobiology. Between 1990 and 1992, annual luncheon meetings were held in conjunction with the meetings of the American Academy of Neurology and, since 1993, annual one-day scientific meetings – on five occasions in conjunction with the annual meetings of AAN, and on one occasion with the American Society of Human Genetics. In 1993, a Main Theme in Neurogenetics was organized at

the World Congress of Neurology in Vancouver, which was attended by over 1000 individuals. In 1997, a half-day symposium on Advances in Neurogenetics was organized at the World Congress in Buenos Aires on behalf of this Research Group. This group has continued to be active, and has tried to involve individuals from both clinical and basic aspects of neurogenetics, as well as fellows and graduate students. The projects proposed by this group in the future are: a newsletter informing members of new scientific discoveries and possible collaborations; an updated list of neurogenetics diseases for which genes have been mapped and/or cloned; organizing educational courses in neurogenetics in developing regions; and providing information on resources available for genetic testing and counseling in neurological diseases. Membership fees of \$20 per year per member and \$10 for medical students, residents, postdoctoral fellows, and graduate students are being collected. As of June 8, 1999, there was US\$946.34 in the bank account.



Dr. Eva Andermann
Chairperson, Neurogenetics RG

BOOK REVIEWS

Cognitive Rehabilitation

Editors: D T Stuss, G Winocur & I H Robertson
ISBN: 0 521 58102 8
No. of pages: 400
Price: £64.95
Publication Date: 1999
Publisher: Cambridge University Press

This book originated from the contents of a conference on 'Cognitive rehabilitation: advances in the rehabilitation of acute and age-related brain disorders', organized by the Baycrest Center for Geriatric Care and the Ontario Mental Health Foundation in 1995. The book is divided in four major parts: mechanisms and principles of recovery, pharmacological approaches, clinical and management issues, and rehabilitation techniques. The chapters review basic scientific topics such as neuro-

plasticity, recovery of function, regeneration and compensation, as well as the pharmacological treatment and the theoretical and methodological issues related to cognitive rehabilitation procedures. Due to the rapid development of knowledge in the last years, some chapters (e.g. on functional neuroimaging and on pharmacological intervention in Alzheimer's disease) are not fully up to date; the most recent references cited are from 1996. In the chapter on 'Outcome measurement in cognitive rehabilitation', a more exhaustive discussion and presentation of the scales and questionnaires used for the evaluation of outcome would have been helpful. This book will be most valuable to health care professionals treating people with cognitive deficits secondary to disturbed brain function. It deserves a place on the shelf of the library in each neurological rehabilitation centre.

Dr. Michel Van Zandijcke
ST-Jan, Brugge, Belgium

Neuro-immunology for the Clinician

Ed: Loren A. Rolak, MD & Yadolah Harati, MD, FACP
ISBN: 0-7506-9616-8
No. of pages: 440
Price: £70.00
Publication Date: 1997
Publisher: Butterworth Heinemann

This topic has advanced beyond recognition since the first book on 'Clinical Neuroimmunology' was published in 1979. Divided into four parts, the first is on Basic Principles which includes besides Fundamentals, Psychoneuroimmunology, Laboratory Testing and Clinical Pharmacology of Immunosuppressants. Part II is on Immunologic Disorders of the Central Nervous System which includes Narcolepsy; Part III on the Peripheral Nervous System includes the Stiff-Person Syndrome, whilst Part IV is on Neurologic Complications of Other Immunologic Disorders and includes Paraneoplastic Syndromes.

This is an up-to-date, comprehensive review of an important growth area for the practising neurologist and the editors are to be congratulated on their endeavour.

Seizures and Epilepsy in the Elderly

Ed: A. James Rowan, MD and R Eugene Ramsay, MD
ISBN: 0-7506-9622-2
No. of pages: 343
Price: not known
Publication Date: 1997
Publisher: Butterworth Heinemann

In spite of an increasing number of books on epilepsy, this book fills a niche. Divided into five parts, the first deals with The Scope of the Problem and includes chapters on Aging and Epidemiology. The second part, entitled Pathophysiology of Aging and its Relationship to Seizures, has eight chapters which range from Epileptogenesis to Falls in the Elderly, a particularly informative chapter. Part III is on Diagnosis and is particularly helpful for the clinician; Part IV on Anti-epileptic drugs will also prove useful for this age group, as does the final Part V on Future Directions.

This is an excellent review of a difficult subject and is highly recommended.

Norman Geschwind: Selected Publications on Language, Behavior and Epilepsy

Ed: Orrin Devinsky, Steven C Schachter
ISBN: 0-7506-9753-9
No. of pages: 601
Price: £37.50
Publication Date: 1997
Publisher: Butterworth Heinemann

The editors of this collection of Norman Geschwind's papers consider that he was the founder of modern behavioural neurology, a claim difficult to gainsay. They have divided his papers under six headings: Disconnection Syndromes, Language Disorders, Alexia and Aphasia; Hemisphere Asymmetries, Cerebral Dominance and Handedness; Epilepsy and Other Neurobehavioural Disorders.

Each part is preceded by a comment from one of the co-editors. There is no doubt that Norman had a great and active mind; although he made the odd error, his stimulating influence is well recorded in these papers. It should be in every neurological library.

Clinical Autonomic Disorders, 2nd Edition

Ed: Phillip A Low
ISBN: 0-316-53281-9
No. of pages: 845
Price: \$206.00
Publication Date: 1997
Publisher: Lippincott-Raven

This second edition updates the well-received first edition of a comprehensive textbook of autonomic disorders with emphasis on management. This edition is organised more systematically. It is divided into three parts: The Scientific Basis; Evaluation; and Clinical Disorders of Autonomic Function, and each chapter begins with a numerical summary. There is a new

chapter on classification; multiple system atrophy has been extensively revised and such recent advances as continuous recordings of cerebral blood flow velocity using transcranial Doppler and time-frequency analysis of cardiovascular function have been incorporated. The whole is an essential reference work for the neurological department.

Neuroinformatics - An Overview of the Human Brain Project

Ed: Stephen H Koslow, Michael F Huerta
ISBN: 0-8058-2099-X
No. of pages: 376
Price: not known
Publication Date: 1997
Publisher: Lawrence Erlbaum Associates

Neuroinformatics is the study and development of information tools for brain and behavioural data and is multi-disciplinary. This is the first of many volumes in this rapidly growing field and gives an overview of the Human Brain Project "a multi-agency federal initiative supporting neuroinformation research".

Whilst 40 years ago the brain was compared to a computer, more understanding has been achieved by using computers to study the brain. The book will be under-

It is the policy of the World Federation of Neurology that books for review in World Neurology shall be dealt with in the following way:

Wherever possible, publishers will be asked to mail review copies to neurologists in all parts of the world. Once reviewed, those books will be retained in Departmental/Institutional Libraries for the benefit of a wide range of neurologists and physicians in that country.

Books received at the WFN London Office will either

- be reviewed by UK-based neurologists (and the books then returned to WFN Head Office for distribution on request to institutions in developing countries) or
- copies received will be retained for such distribution and publishers asked to send another copy of the same book to a notified reviewer or
- publishers will be asked to reimburse the cost of mailing the original book to a reviewer overseas.

stood only by the computer-literate but for those initiated this and successive volumes will prove exciting.

Management of Acute Stroke

Ed: Ashfaq Shuaib & Larry B Goldstein
 ISBN: 0 8247 7092 7
 No. of Pages: 530 (26 chapters)
 Price: US\$175.00
 Publication Date: 1999
 Publisher: Marcel Dekker, Inc, New York, Basel

The design of the content of this book deals with the pathophysiology of stroke and the diagnostic possibilities. The therapy of tissue plasminogen activators gives the book a special preference. The laboratory investigations for stroke are described and discussed. Further, the medical and neurological complications of stroke and the underlying pathophysiological mechanisms and diagnostic evaluation is considered under the aspect of therapeutic consequences. The scope of the book is also enlarged by the fact that the speciality of stroke in neonates, infants, children, adults and elderly people is presented. The second half of the book is devoted to managing acute stroke. The present state of the surgical therapeutic possibilities is discussed. The edition is so excellent that even though the book consists of 26 different chapters it presents to the reader as one whole piece.

Prof. Helmut Lechner
 Graz, Austria

Opioid Sensitivity of Chronic Noncancer Pain Progress in Pain Research and Management, Volume 14

Ed: Eija Kalso, Henry J McQuay and Zsuzsanna Wiesenfeld-Hallin
 ISBN: 0 931092 28 0
 No. of Pages: 397
 Price: US\$68.00 [IASP Members US\$44.20]
 Publication Date: 1999
 Publisher: International Association for the Study of Pain

This book is a collection of papers from a meeting on Pain in December 1998. It will be useful for clinical neurologists who have a particular interest in pain management and to those who are engaged in the academic study of pain and pain syndromes. The received wisdom has been that morphine and other opioids are ineffective and therefore contraindicated in the management of neuropathic pain syn-

dromes such as postherpetic neuralgia, diabetic neuropathy, nerve traction or compression, and complex regional pain syndrome (reflex sympathetic dystrophy). Although this view remains broadly correct contributors in this book review the value of combined therapy (opioid + local anaesthetic) and route of administration (eg intrathecal) and call for more comparative studies with drugs such as gabapentin with and without antidepressants. A chapter on headache (F W Bach) concludes opioids have little established efficacy in the management of headache. Studies of pain are notoriously difficult but I would have liked a chapter on pain of central origin (thalamic and brainstem).

Dr R. Godwin-Austen
 London, UK

Essentials of Clinical Epilepsy

Ed: Alan Guberman, J Bruni
 ISBN: 0 7506 7109 2
 No. of Pages: 207
 Price: \$45.00
 Publication Date: 1999
 Publisher: Butterworth Heinemann

This is a concise handbook on clinical epilepsy addressing important topics including differential diagnosis, investigations, pharmacotherapy, surgical treatment and psychosocial aspects of epilepsy. The chapter on investigations is illustrated by EEG tracings and MRI scans. It contains up-to-date information for the management of epilepsy presented in a bulleted list and tabular format. The authors have suggested a list of references at the end of each chapter for those who are interested in in-depth review of the topic. It will be a useful book for residents in neurology, primary care physicians and other medical practitioners treating epilepsy.

Dr I.M.S. Sawhney
 Swansea, UK

Manual of Neurologic Therapeutics, 6th Edition

Editor: Martin A. Samuels
 ISBN: 0-7817-1645-4
 No. of pages: 499
 Price: not known
 Publication Date: 1999
 Publisher: Lippincott, Williams & Wilkins

This is a spiral bound pocket book Edition which is dedicated to Dr. Vicent P. Perlo on the same lines as the previous five Editions which were also dedicated to outstanding neurologists. The book has 17 chapters divided into two major groups, Neurological Symptoms and Neurological

Diseases. The first part deals with coma, headache, intellectual dysfunctions, dizziness, epilepsy, brain death and persistent vegetative state. The second part contains chapters on infectious diseases, neuropsychiatric disorders, stroke, neoplasms, head injury and spinal cord trauma, demyelinating diseases, toxic and metabolic disorders, movement disorders, diseases of nerve and muscle and lastly problems related to chronic neurologic disorders. Important aspects of each problem have been highlighted and therapeutic modalities offered. It is an excellent edition for every library whether it is personal or institutional and at the same time a must for every student, or young residents who are involved in care of neurologically sick patients.

Editor-in-Chief

Peripheral Neuropathy in Children, 2nd Edition

Editors: R A Ouvrier, J G McLeod, J D Pollard
 ISBN: 1-898-68317 4
 No. of Pages: 335
 Price: £50.00 (US\$80.00)
 Publication Date: 1999
 Publisher: Mac Keith Press (for International Child Neurology Association) – distributed by Cambridge University Press

Similarities of peripheral neuropathies observed in adults and children are well recognized, however there are some peculiarities, which are exclusive to the paediatric age group. This is particularly so in hereditary neuropathies. The authors have done a good job in this book by delineating and classifying the peripheral neuropathies as seen in children. They have included the recent advances in molecular biology and genetics as related to some of the hereditary neuropathies. Emphasis has been given to the pathogenesis of certain neuropathies particularly the inflammatory neuropathies. The book has 17 chapters in which a wide spectrum of peripheral neuropathies seen in children have been discussed in detail particularly the Guillain-Barré syndrome, ataxic, sensory, toxic, metabolic and degenerative neuropathies. It is a useful book which should be on the shelf of all institutions.

Editor-in-Chief

Myasthenia Gravis

Editor: H J G H Oosterhuis
 ISBN: 90 901 0600 6
 No. of Pages: not known
 Price: US\$ 65.00 / NGL 125.00
 Publication Date: December 1997

New and forthcoming books



Handbook of Clinical Neurology – Revised series 72 (28)

The Epilepsies, Part I

Series edited by P.J. Vinken and G.W. Bruyn, volume edited by H. Meinardi

ISBN 0-444-82810-9, 452 pages, 1999

Handbook of Clinical Neurology – Revised series 73 (29)

The Epilepsies, Part II

Series edited by P.J. Vinken and G.W. Bruyn, volume edited by H. Meinardi

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Journal of the Neurological Sciences – News

In each issue of *World Neurology*, you will find specific information related to the *Journal of the Neurological Sciences*, the official journal of the World Federation of Neurology. In this issue, we will highlight some recently published articles that are of major importance to all neurologists worldwide.

Review

Hepatic encephalopathy: molecular mechanisms underlying the clinical syndrome

Jan Albrecht^a, E. Anthony Jones^b

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Journal of the Neurological Sciences, Volume 170/2, pages 138–146

Abstract

Hepatic encephalopathy (HE) and portal-systemic encephalopathy (PSE) are the terms used interchangeably to describe a complex neuropsychiatric syndrome associated with acute or chronic hepatocellular failure, in-



creased portal systemic shunting of blood, or both. Hepatic encephalopathy complicating acute liver failure is referred to as fulminant hepatic failure (FHF). The clinical manifestations of HE or PSE range from minimal changes in personality and motor activity, to overt deterioration of intellectual function, decreased consciousness and coma, and appear to reflect primarily a variable imbalance between excitatory and inhibitory neurotransmission. Pathogenic mechanisms that may be responsible for HE have been extensively investigated using animal models of HE, or cultures of CNS cells treated with neuroactive substances that have been implicated in HE. Of the many compounds that accumulate in the circulation as a consequence of impaired liver function, ammonia is considered to play an important role in the onset of HE. Acute ammonia neurotoxicity, which may be a cause of seizures in FHF, is excitotoxic in nature, being associated with increased synaptic release of glutamate (Glu), the major excitatory neurotransmitter of the brain, and subsequent overactivation of the ionotropic Glu receptors, mainly the *N*-methyl-D-aspartate (NMDA) receptors. Hepatic encephalopathy complicating chronic liver failure appears to be associated with a shift in the balance between inhibitory and excitatory neurotransmission towards a net increase of inhibitory neurotransmission, as a consequence of at least two factors. The first is down-regulation of Glu receptors resulting in decreased glutamatergic tone. The down-regulation follows excessive extrasynaptic accumulation of Glu resulting from its impaired re-uptake into nerve endings and astrocytes. Liver failure inactivates the Glu transporter GLT-1 in astrocytes. The second factor is an increase in inhibitory neurotransmission by γ -aminobutyric acid (GABA) due to (a) increased brain levels of natural benzodiazepines; (b) increased availability of GABA at GABA-A receptors, due to enhanced synaptic release of the amino acid; (c) direct interaction of modestly increased levels of ammonia with the GABA-A—benzodiazepine receptor complex; and (d) ammonia-induced up-regulation of astrocytic peripheral benzodiazepine receptors (PBZR). Brain ammonia is metabolised in astrocytes to glutamine (Gln), an osmolyte, and increased Gln accumulation in these cells may contribute to cytotoxic brain edema, which often complicates FHF. Glutamine efflux from the brain is an event that facilitates plasma-to-brain transport of aromatic amino acids. Tryptophan and tyrosine are direct precursors of the aminergic inhibitory neurotransmitters, serotonin and dopamine, respectively. Changes in serotonin and dopamine and their receptors may contribute to some of the motor manifestations of HE. Finally, oxindole, a recently discovered tryptophan metabolite with strong sedative and hypotensive properties, has been shown to accumulate in cirrhotic patients and animal models of HE. © 1999 Elsevier Science B.V. All rights reserved.

Author Keywords: γ -Aminobutyric acid; Benzodiazepines; Catecholamines; Glutamate; Hepatic encephalopathy

Long term MRI follow-up of patients with post infectious encephalomyelitis: evidence for a monophasic disease

J. I. O'Riordan^a, B. Gomez-Anson^b, I. F. Moseley^b and D. H. Miller

^a NMR Research Unit, The Institute of Neurology and National Hospital for Neurology and Neurosurgery, Queen Square, London WC1N 3BG, UK, ^b Lysholm Department of Neuroradiology, The National Hospital of Neurology and Neurosurgery, Queen Square, London WC1N 3BG, UK

Journal of the Neurological Sciences, Volume 167/2, pages 132–136.

Abstract

Post infectious encephalomyelitis and multiple sclerosis are both inflammatory demyelinating disorders of the central nervous system. Whereas multiple sclerosis is a multi phasic disease with recurrent episodes disseminated in time and place, post infectious encephalomyelitis is usually considered to be a monophasic illness. This study used serial brain MRI to clarify whether the latter hypothesis holds for the long term. Post infectious encephalomyelitis was defined as the development of a central nervous system white matter disorder occurring in close temporal relationship with a viral, bacterial or other infection. There were eleven patients, mean age at presentation 21 years (4–48), and mean period of follow-up of 8 years (3.5–11). T2-weighted brain MRI was abnormal in all 11 cases during the acute stages of the illness. On follow-up 6 patients had made a complete clinical recovery, 4 patients had mild residual deficits and one severe neurological deficits necessitating ventilatory support. No patient

experienced an exacerbation during the follow-up period. MRI revealed complete resolution of abnormalities in 3 and partial resolution in 7; new white matter lesions were seen in only one patient. This long term follow-up study suggests that there is a definable group with post infectious encephalomyelitis who exhibit a monophasic clinical and MRI pattern in the long term. © 1999 Elsevier Science B.V. All rights reserved.

Author Keywords: Post infectious encephalomyelitis; Multiple sclerosis

Surgical treatment of Parkinson's disease

William C. Koller^a, Rajesh Pahwa^a, Kelly E. Lyons^a and Alberto Albanese^b

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Journal of the Neurological Sciences, Volume 167/1, pages 1–10

Abstract

Stereotaxic surgery is an effective therapeutic maneuver in the management of advanced Parkinson's disease (PD). Thalamotomy is an effective measure to control tremor but other PD symptoms are not changed. Bilateral operations are associated with a risk of severe speech impairment. Deep brain stimulation (DBS) of the thalamus is as effective as thalamotomy and is associated with fewer side effects. Pallidotomy is effective in reducing contralateral dyskinesias and the cardinal symptoms of PD. Bilateral pallidotomy often results in cognitive dysfunction. Deep brain stimulation of the pallidum replicates the positive effects of pallidotomy and appears to be safer than ablative lesions. Subthalamic DBS is currently under investigation. This procedure may control all PD symptoms, and the dose of levodopa can often be dramatically reduced. Neurotransplantation is a promising surgical approach to PD. However, further investigation is needed to optimize this approach. © 1999 Elsevier Science B.V. All rights reserved.

Author Keywords: Parkinson's disease; Deep brain stimulation; Thalamotomy; Pallidotomy; Subthalamus; VIM nucleus

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Publisher: Groningen Neurological Press

This monograph distills the essence of the experience that Professor Oosterhuis has gained from the careful study of more than 800 patients with myasthenia gravis over the last 40 years. His clinical experience of this disease is vast, and the text is illuminated by many highly instructive clinical histories together with photographs that illustrate the characteristic features of the disease, as well as conditions that can be mistaken for it. A brief history is included, and the different treatments he has used are described. The reader will find more emphasis on the long-standing therapies of anticholinesterase medication and thymectomy than on immunosuppressive drugs, with which he is rather less in sympathy. Current concepts of pathogenesis are discussed quite briefly in an epilogue. This text will be invaluable to those setting up, or indeed already running, a neuromuscular clinic to which myasthenia gravis patients are referred.

Prof. John Newsom-Davis
Oxford, UK

CALENDAR

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The Movement Disorder Society's 6th International Congress of Parkinson's Disease and Movement Disorders

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Contact: MDS 2000, c/o AKM Congress Service, PO Box, CH-4005 Basel, Switzerland

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15th European Sleep Research Society Congress

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Marriott Copley Plaza, Boston, Massachusetts, USA

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Contact: Satish Jain, MD

Secretary General

Department of Neurology, Neurosciences Centre, All India Institute of Medical Sciences, New Delhi – 110 029, India

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2001

American Academy of Neurology Annual Meeting and Exhibition

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2002

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