VOL. 24 • NO. 4 • AUGUST 2009

WORLD NEUROLOGY

THE OFFICIAL NEWSLETTER OF THE WORLD FEDERATION OF NEUROLOGY

Swiss Society Celebrates 100 Years

BY DANIEL WALDVOGEL, M.D., PHILIPP O. VALKO, M.D., AND CLAUDIO L. BASSETTI, M.D.

The Swiss Neurological Society celebrated its 100th anniversary last year. Since its founding in 1908, the society's history has mirrored neurology's emergence as a specialty separate from psychiatry and internal medicine. At the same time, the society played an important role in advancing the fledgling specialty during two world wars by continuing to publish new work by neurologists from elsewhere in Europe, and most notably, Jewish neurologists and German neurologists who were persecuted in their own country.

Today, the society has 313 active members, 7 honorary members, and 15 corresponding members. It meets twice a year, and takes pride in offering theme-based courses and lectures with distinguished speakers.

The current president of the society, Dr. Claudio L. Bassetti, succeeded Dr. Max Wiederkehr, a neurologist in private practice. Dr. Wiederkehr's tenure exemplified the strong ties in Switzerland between academic neurologists and those in private practice. Most neurologists in private practice have spent years of continuous work at teaching hospitals, ensuring a high level of competence in neurologists in private practice.

Courtesy Swiss Neurological Society

Dr. Claudio L. Bassetti is the president of the SNS, which had a defining role in European neurology during two world wars.

Even before the SNS, Switzerland had made important contributions to the clinical and experimental neurosciences (see box on p. 8). The founding date of the society is considered to be Nov. 5 of 1908, when members of an action committee—Robert Bing, Paul Dubois, Paul-Louis Ladame, Constantin von Monakow, Louis Schnyder, Schumann, Alfred Ulrich, Otto Veraguth, Emil Villiger, and Gustav Wolff—met in the Swiss town of Olten. The SNS was officially constituted on March 13, 1909, in Berne.

The movement was initiated by Robert Bing (1878-1956), who had completed postdoctoral work at Basel University on spinocerebellar pathways and opened a neurological outpatient clinic. He had convinced Dubois and von Monakow of the need for a society for the specialty.

The importance of establishing a specialist society for neurology at that time should be seen in the context of the protracted and arduous attempts to disengage neurology from psychiatry and internal medicine.

The giant strides made in neuroanatomy and clinical neurology in the second half of the 19th century fueled calls in Europe and the United States for independence. The turn of the century saw the emergence of autonomous specialist societies in numerous countries. The world's first specialist neurological society, the American Neurological Association, was founded in 1875 by William A. Hammond in the United States; the Neurological Society of London was founded in 1886 and renamed the Neurological Society of the United Kingdom in 1905. In 1899, Jules Déjérine and a large group of Jean Martin Charcot followers founded the Société de Neurologie de Paris,

See **Swiss** • *page 8*

INSIDE

Window for rTPA Therapy in Stroke Pushed to 4.5 Hours

BY RENÉE MATTHEWS
Elsevier Global Medical News

Intravenous recombinant tissue plasminogen activator can be safely administered 3-4.5 hours after acute ischemic stroke and could improve outcomes in some patients, according to a joint advisory statement from the American Heart Association and the American Stroke Association.

Current guidelines stipulate that intravenous recombinant tissue plasminogen activator (rTPA) be administered within 3 hours of symptom onset to improve neurological outcomes, but many patients do not receive it because they present for treatment after the 3-hour window.

However, Dr. Gregory J. del Zoppo and his coauthors, writing on behalf of the AHA Stroke Council, emphasized that patients who are eligible for rTPA therapy within the 3-hour window should be treated according to the council's 2007 guidelines. "Delays in evaluation and initiation of therapy should be avoided, because the opportunity for improvement is greater with earlier treatment," they wrote in an online article (doi:10.1161/STROKEAHA.109.192535).

That said, they noted that rTPA should be used in "eligible patients" 3-4.5 hours after stroke. Eligibility criteria for the extended treatment period would be the same as those for the 3-hour cut-off, except if patients also conformed to one of the following: They were older than age 80; were taking anticoagulants, regardless of their international normalized ratio; had a baseline National Institutes of Health Stroke Scale score greater than 25; or had a history of both stroke and diabetes.

Dr. Joseph P. Broderick, professor and chair of neurology at the University of Cincinnati Neurosciences Institute and Academic Health Center, said

See **rTPA** • *page 12*

EDITOR IN CHIEF'S COLUMN

Authoritarian Neurology

Neurologists have to assume different personalities from time to time depending on the circumstance: empathetic, fatherly, motherly, didactic, and even authoritarian. Not, of course, as authoritarian as neurosurgeons. Surgeons, by their very nature, are different from neurologists and being authoritarian comes naturally. Some neurologists may have to force it.

BY MARK HALLETT, M.D.

A good example of useful authoritarianism is found on page 13 in this issue of World Neurology in Robert Daroff's story about the renowned neurologist, Fred Plum. A strong personality can take charge and move things in the right direction, and Dr. Daroff illustrates how by doing so, Dr. Plum not only changed the outcome of a single event, but in another circumstance changed the course of Dr. Daroff's life.

I have a personal example of a forceful personality: Raymond D. Adams. A young boy I was taking care of at the Brigham and Women's Hospital in Boston had frequent jaw opening movements. The movements appeared to be fully involuntary and did not have any urge at onset or relief afterward that would have suggested a tic. I had done a series of tests and had a number of therapeutic failures. Dr. Adams was a visiting professor at the time, and I showed him the patient. He looked the boy in the eye and said sternly, "Don't do that." And the boy never did it again. A rapid cure of a likely stereotopy.

Another situation in which there is a role for the authoritarian neurologist is in dealing with conversion disorders. (An article about individualizing one's approach to a patient with a psychogenic movement disorder is on page 5 of this issue.) One of the frequent requirements on the part of the neurologist is to be authoritarian. Patients often do not want to believe that their disorder has a psychiatric etiology, and they want to continue looking for an organic problem. If the physician seems uncertain, patients might sense that uncertainty and will not accept the diagnosis. They will then continue to doctor-shop to find the brain tumor. Of course, if there is really uncertainty, further investigations are warranted. But when certain, be authoritarian—it can be helpful. ■

WCN 2009

Good News Update

BY NIPHON POUNGVARIN, M.D.
President, World Congress of Neurology

I would like to share some good news with you about the situation in Thailand, specifically in Bangkok, where we will hold our World Congress of Neurology Oct. 24-30 this year.

Enhanced security measures have been implemented at all international airports and major hotels to ensure the complete safety and well-being of overseas visitors to Thailand.

NIPHON POUNGVARIN, M.D.

The Thai government is likely to announce free insurance for all international visitors between May and the end of November this year. The insurance coverage would mean that in the unlikely event of any political disorder leading to travel or event disruption, all WCN attendees from overseas would be covered for travel disruption, hospitalization, and medical expenses up to 10 days. The government is proposing to underwrite the insurance policy with a budget of U.S. $295 million. As soon as the insurance coverage is passed into law, we will inform you by e-mail.

I am also honored and pleased to inform you that Thailand's Princess Maha Chakri Sirindhorn will preside at our opening ceremony on Sunday, Oct. 25.

The WCN 2009 organizing committee has been working hard to create a strong and inclusive program for those who will be attending. To date, we have received more than 1,000 abstracts from researchers and clinicians in more than 80 countries.

With so many preparations in place, it would be very unfortunate if some of our members decided not to come based on misconceptions about Thailand.

Here is what the media did not report during the protests last year and early this year: No tourists were injured nor was their safety compromised; the protests were primarily in front of Government House and in isolated locations far from hotels and congress venues; and even during the isolated disruptions, business continued in almost all of the city and is now back to normal.

Today there is a new unity in Thailand. There is a bottom-up commitment from the people and a top-down commitment from the government to ensure that all visitors have a wonderful, trouble-free, experience here. Spanish tennis player, Rafael Nadal, has said he will bring his family for a holiday in Thailand before joining the PTT Thailand Open tennis championship in Bangkok from Sept. 26 to Oct. 4. So perhaps I could ask you, my fellow neurologists, to also give Thailand a sporting chance!

We are committed to improving the human condition through our work. The development of neurology, especially its expansion in poorer countries, can only be served if we unite, like the people of Thailand, to do what is right. So I ask you to show your commitment to the advancement and expansion of neurological science and register for the Congress at www.wcn2009bangkok.com. I look forward to greeting you all in Bangkok. ■

World Neurology

World Neurology, an official publication of the World Federation of Neurology, provides reports from the leadership of the WFN, its member societies, neurologists around the globe, and news from the cutting edge of clinical neurology. Content for World Neurology is provided by the World Federation of Neurology and Elsevier Global Medical News.

Editorial Correspondence: Send editorial correspondence to World Neurology, 5635 Fishers Lane, Suite 6000, Rockville MD 20852, U.S.A.; worldneurology@elsevier.com; Phone +1-800-798-1822

Address Change: Fax change of address to +1-973-290-8245

POSTMASTER: Send change of address (with old mailing label) to World Neurology, Circulation, 60 B, Columbia Rd., 2nd Fl., Morristown NJ USA 07960

World Neurology, ISSN: 0899-9465, is published bimonthly by Elsevier Inc., 60 B, Columbia Rd., 2nd Fl., Morristown NJ 07960. Phone +1-973-290-8200; fax +1-973-290-8250.

Global Medical Research
Publisher Peter F. Bakker

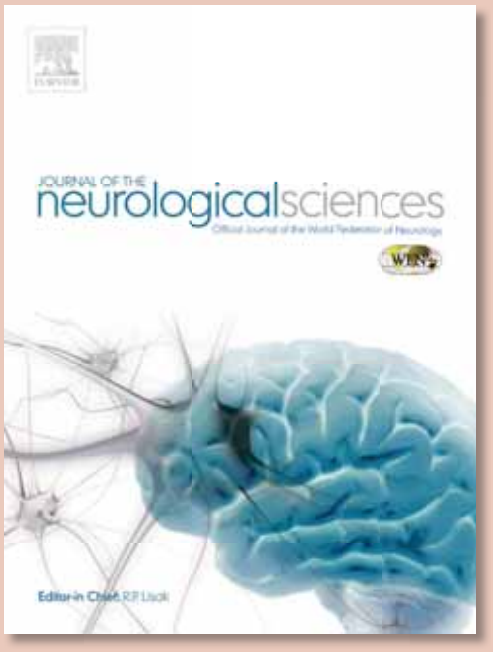
Elsevier Global Medical News
A Division of International Medical News Group
President IMNG Alan J. Imhoff
Editor in Chief Mary Jo M. Dales
Executive Editors Denise Fulton, Kathy Scarbeck
Managing Editor Renée Matthews
Clinical News Editor Jeff Evans
VP, Medical Education Sylvia H. Reitman
Circulation Analyst Barbara Cavallaro
Executive Director, Operations Jim Chicca
Director, Production and Manufacturing Yvonne Evans
Production Manager Judi Sheffer
Creative Director Louise A. Koenig

EDITORIAL OFFICE
5635 Fishers Lane, Suite 6000
Rockville, MD 20852
+1-240-221-4500 Fax: +1-240-221-2541

US ADVERTISING
Rory Flanagan
60 Columbia Rd., Building B
Morristown, NJ 07960
+1-973-290-8222 Fax +1-973-290-8250
r.flanagan@elsevier.com

INTERNATIONAL ADVERTISING
Martin Sibson
Business Development Executive
Elsevier Pharma Solutions
London, UK
+44 (0) 207 424 4963
m.sibson@elsevier.com

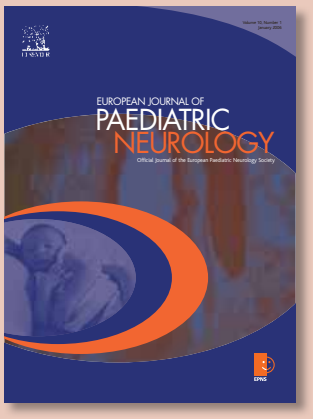
Leading resources in clinical neurology!

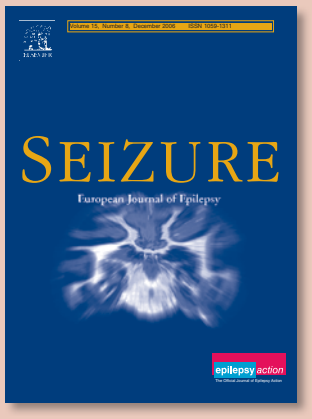


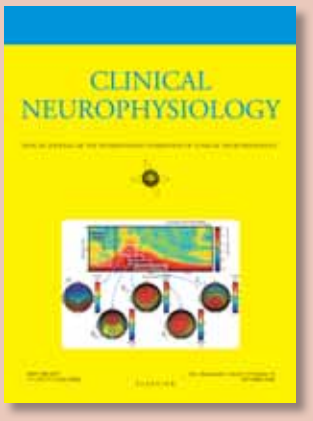
The official journal of the World Federation of Neurology

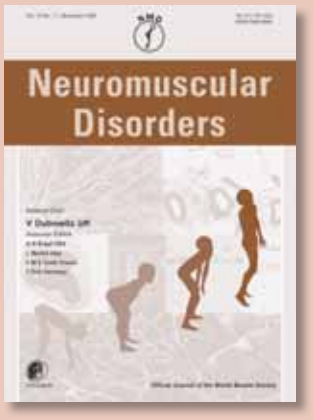
THE journal for the prompt publication of studies on the interface between clinical neurology and the basic sciences.
And did you know.. *Journal of the Neurological Sciences* is your ultimate resource for the latest developments and research on Vascular Dementia, Stroke and Multiple Sclerosis!

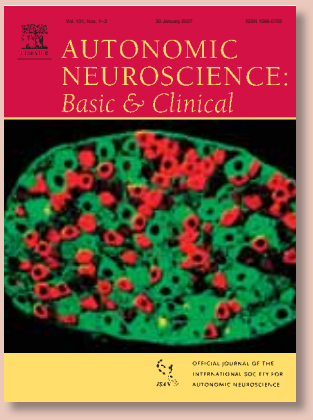
www.elsevier.com/jns











- Acute Pain
- Alzheimer's and Dementia
- Autonomic Neuroscience: Basic and Clinical
- Brain & Development
- Clinical Neurology and Neurosurgery
- Clinical Neurology News
- Clinical Neurophysiology
- Epilepsy & Behavior
- Epilepsy Research
- European Journal of Paediatric Neurology
- European Journal of Pain
- Experimental Neurology
- Journal of Clinical Neuroscience
- Journal of Neuroimmunology
- Journal of the Neurological Sciences
- Journal of Pain
- Journal of Pain and Symptom Management
- The Lancet Neurology
- Neurobiology of Aging
- Neuromuscular Disorders
- Neuroscience & Biobehavioral Reviews
- Neurotherapeutics (NeuroRX)
- Pain
- Parkinsonism and Related Disorders
- Pediatric Neurology
- Regional Anesthesia and Pain Medicine
- Seizure: European Journal of Epilepsy
- Sleep Medicine
- Sleep Medicine Reviews
- Surgical Neurology

For a complete list of neurology products, detailed information on the titles above and online access to the journal articles, visit

www.elsevier.com/clinicalneurology

PRESIDENT'S COLUMN

WFN and the Africa Initiative

BY JOHAN A. AARLI, M.D.

The main mission of the World Federation of Neurology today, as I see it, is to reduce the global burden associated with neurological disorders.

According to the Neurology Atlas, which was prepared by the World Health Organization (WHO) and the WFN in 2004, the available resources are insufficient for this purpose. In addition, there are significant disparities across regions and income groups, with low-income countries having extremely scanty resources.

Dr. Margaret Chan, the director-general of the WHO, and Jean Ping, the chair of the Commission of the African Union, have both pointed out that Africa is facing a dramatic public health crisis. What sets Sub-Saharan Africa apart, compared with many parts of the world, is the lack of a neurology infrastructure.

EDUCATIONAL ACTIVITIES ARE CENTRAL TO THE AFRICAN PROGRAM, AND INCLUDE TRAINING OPPORTUNITIES FOR WOULD-BE NEUROLOGISTS AND THOSE WHO ARE ALREADY IN PRACTICE.

The WHO has estimated that there is an average of 0.03 neurologists per 100,000 individuals in Africa, compared with 4.84 in Europe. At the same time, the burden of neurological disease continues to grow. With a population of about 700 million, around 45% live on less than U.S. $1 a day. The medical infrastructure is poorly developed and has neared collapse in some areas. The AIDS epidemic presents an additional socioeconomic problem.

This is the background for the Africa Initiative, a program launched by the WFN in December 2006 to develop neurological services across the continent. The Initiative is a collective term for describing various WFN activities related to that purpose.

Those activities comprise training new neurologists, establishing educational programs in neurology, supporting new national neurological associations, assistance in fund-raising for neurology in Africa, traveling fellowships, support of public health activities in Sub-Saharan Africa, and collaboration with the WHO, the European Federation of Neurological Societies (EFNS), and the International Brain Research Organization (IBRO).

The major goals of the Initiative are to strengthen existing units and establish new centers of excellence in neurology. Educational activities are central to the program and include training opportunities for would-be neurologists and those who are already in practice.

At the initiation of the program, Prof. Amadou Gallo Diop in Dakar, Senegal, noted the importance of working with Africa: Go and ask the people in Africa, what are the realities, what are your needs, how do you want the project to be managed, what kind of support are you waiting for?

International institutions need to work in partnership with Africa to meet the growing burden of neurological disorders. This is where we had to start. We formed the WFN Africa Committee, a team that includes African neurologists. The Committee sets the direction of the Initiative, moving forward with the support of WFN's Task and Advisory Force for Neurology in Africa, a group of international experts in neurology.

In addition, the Africa Initiative depends on political will and commitment from local decision makers, which are additional challenges for the WHO and our African colleagues.

How many neurologists are there in Sub-Saharan Africa? Prof. Gallo Diop has prepared a directory—much like that of the American Academy of Neurology Membership Directory and Resource Guide or the EFNS directory—and has put the number at 267 for 2009. The last estimate, from 1996, was 121.

In 2008, the first Ethiopian neurology residents completed their training at Addis Ababa University. That country now has 14 neurologists for a population of about 80 million people. Of the 10 existing residents, half were from outside the capital. Even with inherent uncertainties, the number of neurologists in Africa is increasing, and it is encouraging that new neurologists have now been trained in South Africa for Angola and Namibia.

We also have many more African national neurological associations as WFN members. It is encouraging that Burkina Faso, Cameroon, Democratic Republic of Congo, Guinea, Libya, Nigeria, Senegal, Uganda, and Zambia have become new WFN members through their national associations, in addition to the African countries that have been members for some time.

The long-term goal for the WFN is that all countries on the continent should train their own neurologists. There are medical schools in Africa where there is no neurologist, and new candidates receive no basic clinical training in neurology. We need a minimum of neurologists on the teaching staff.

The Federation can do little in national health politics, but again, the WHO is a powerful force for setting the agendas of health planners and ministers of health, and its current spotlight on diseases of the nervous system is a hopeful development. WFN is pointing out the need for neurological expertise at medical schools in Africa.

New specialists tend to stay in the places where they have been trained—such as North America, Europe, Australia, and Japan—so the Federation is working to have training centers on the African continent in those countries that lack training possibilities. For French-speaking countries, there is a generous offer from Service de Neurologie, Hôpital des Spécialités, in Rabat, Morocco, to train specialists in neurology from other African countries. Candidates from English-speaking countries have a similar possible partnership with centers in South Africa and Egypt.

Africa is a huge continent, and there are five regions within Sub-Sahara—North, East, West, Central, and South. There is already a move toward forming African Regional Training Centres of Excellence in Neurology, in which the WFN Africa Committee will have a decisive action.

Many European countries have traditionally had close and bilateral cultural contact with African countries. For example, the EFNS, which has a close collaboration with the WFN, organized the Regional Teaching Course in Dakar, Senegal, in June 2008 as part of its educational program. The trainees came from 18 African countries and had selected the topics for the course, which was a great success. The next EFNS teaching course takes place in Addis Ababa, Ethiopia, in June.

The Initiative also has close contact with the IBRO, which promotes international collaboration and interchange of scientific information on brain research. IBRO has been actively involved in the program, also at the Dakar meeting and again in Addis Ababa, underscoring the fact that brain research is an important part of the Initiative.

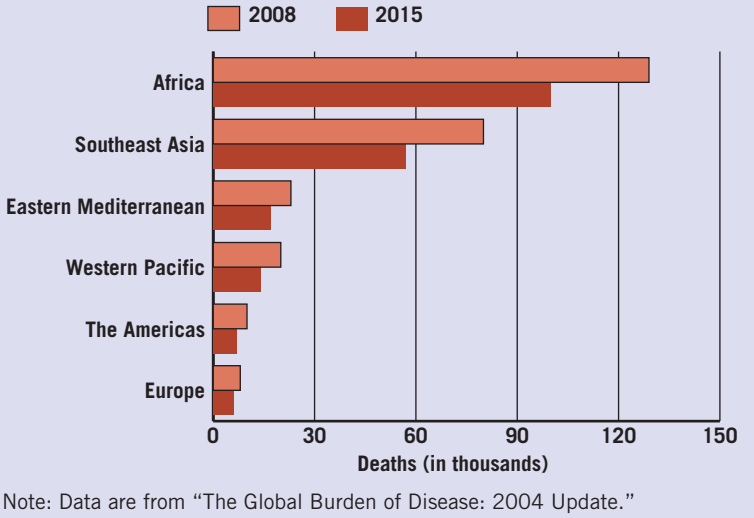
We have also established an African Department-to-Department Cooperation program, modeled after the highly successful EFNS program, which promotes international collaboration and interchange of scientific information on brain research and allows for younger neurologists to visit and learn at other departments. The Federation is also establishing traveling support and fellowships for younger neurologists and has covered the travel costs for a number of African neurologists so that they can attend international congresses.

A problem in many developing countries is the difficulty of integrating neurology into primary health services, as Dr. Robert Lee notes on page 10 in his article about his experiences as a volunteer in Laos. Since medical resources are often centralized in or around big cities, many patients in rural areas still have no access to a neurologist.

In Zambia, Dr. Gretchen Birbeck, of Michigan State University, East Lansing, U.S.A., is organizing a training program that has been run by WFN and the University of Zambia, based at Chainama College of Health Sciences, near Lusaka. Neurologists from the United States pay regular teaching visits to the college. In Senegal, funding is being provided for a neuro-caravan project, which is overseen by Prof. Gallo Diop as a way of taking neurology care into rural areas. In Sudan, Dr. Osheik Seidi has recently organized the first clinical neurology skills course.

Although the WHO, WFN, EFNS, Pan African Association of Neurological Sciences, or any other neurology nongovernmental organization have the resources to carry these initiatives alone, much is being obtained by strengthening neurological care within existing health care systems and by international collaboration. ■

DATA WATCH



Note: Data are from "The Global Burden of Disease: 2004 Update."
Source: World Health Organization

Elsevier Global Medical News

WCN 2009 SCIENTIFIC SESSIONS

'Innovation' Theme Threads Through Program

BY NARAPORN PRAYOONWIWAT, M.D.
Chair, Scientific Program, WCN 2009

The scientific program for the upcoming World Congress of Neurology is central to the Congress being a success. In this edition of WORLD NEUROLOGY, I would like to share some highlights of what we have planned for the Congress, which takes place Oct. 24-30 in Bangkok.

The theme for the scientific program is "Innovation in Neurology," and we have invited numerous international experts to speak about the innovations and latest research advances in stroke, epilepsy, neurogenetics, neurovirology, behavioral neurology, multiple sclerosis, dementia, movement disorders, and headache and pain. We hope these sessions will be a rich source of information for the attendees and will provide them with useful practical guidance in the clinical or research setting.

The organizing committee is proud to announce that Nobel Laureate, Dr. Stanley B. Prusiner, who won the 1997 Nobel Prize for physiology and medicine for his discovery of prions, will deliver an address on the latest developments in a session on prion disease.

Dr. Johan A. Aarli, the President of the World Federation of Neurology, will speak about the urgent need to bring good neurological care to people in developing countries. Dr. Vladimir Hachinski, the First Vice-President and an internationally respected authority in the modern debate on stroke, will discuss the global agenda on stroke. This devastating condition affects a large proportion of the world's population, particularly in Asia, where access to treatment is limited.


NARAPORN PRAYOONWIWAT, M.D.

Of course, we will also address controversial issues. For example, Peter Sandercock, D.M., and Dr. Louis R. Caplan, will debate whether good old aspirin is still the "best antiplatelet for stroke prevention," and Alastair Compston, Ph.D., MBBS, and Dr. Vanda A. Lennon will explore conflicting opinions on whether Devic disease, a common demyelinating disease in the East, is the same as its Western counterpart, multiple sclerosis.

In the field of epilepsy, Dr. Samuel F. Berkovic and Dr. Michael R. Johnson will provide some clarity as to whether or not one should do a genetic work-up for epileptic patients. And Dr. Serge Gauthier and Dr. Rachelle S. Doody will talk about whether a diagnosis of predementia, or mild cognitive impairment, might be as simple as checking for a biomarker and whether neuropsychometric testing is reliable.

Other compelling areas of neurology will be covered as well. In addition to the daily main themes on stroke, multiple sclerosis, epilepsy, neurodegenerative diseases, and headache and pain, there will be parallel sessions on infections, imaging, neurosonology, stem cells, movement disorders, genetic diseases, neuropathy, myopathy, and more. There will also be presentations on the relationship between neurology and the creative arts and artists, and ethics and palliative care.

Delegates will have the opportunity to contribute to the scientific program through abstracts based on their research. There will also be many platform presentations and abundant space for poster presentations.

Finally, remember that there will be time for fun as well as learning. Teams representing the various countries in attendance at the Congress participate in a popular event: the 3rd Tournament of the Minds. We will arrange a special prize for the winning team. ■

Individualize Psychogenic Movement Disorder Diagnosis

BY JEFF EVANS
Elsevier Global Medical News

WASHINGTON — Clinicians who see patients with a psychogenic movement disorder must be cautious in how they frame their explanation of the cause and source of their condition to avoid alienating patients, according to Dr. Jon Stone.

Because it may be hard for a majority of patients to accept, at least initially, that their movement disorder has a psychological etiology, it may be best to give a mechanistic, or functional, explanation that says there is a problem with their nervous system, even though it is not damaged. That method is probably the preferred approach, unless the clinician feels that the patient is ready to accept a psychological explanation, said Dr. Stone, a consultant neurologist at Western General Hospital, Edinburgh, Scotland, and an honorary senior lecturer in neurology at the University of Edinburgh.


JON STONE, M.D.

Psychogenic movement disorder (PMD) diagnoses may be difficult for patients to accept because they feel very strongly that they do not have a psychological problem. This is borne out in studies that have shown that about a quarter of all patients with conversion symptoms endorse stress or psychological factors as a potential cause of their symptoms; probably less than 10% would endorse it as the main cause, Dr. Stone said at an international conference sponsored by the Movement Disorder Society.

Some patients may have a secret fear that they are going "crazy" and may be particularly sensitive to being told that their problems are psychological in nature. They may interpret this to mean that the clinician thinks they are faking their problem and are in control of their symptoms, which is the "diametric opposite of their experience" in which they may at times be in control and other times not be in control.

Dr. W. Curt LaFrance Jr., of Brown University, Providence, R.I., U.S.A., commented in a discussion session at the conference that "the key process here for neurologists to hear is, 'What is going to build rapport and not alienate my patient?' We really need to address that before asking 'What do we call this thing?'"

Some findings suggest that a physician's explanation of the diagnosis could affect patients' outcomes. One study of patients with psychogenic tremor found that their outcome was correlated with their level of perceived satisfaction with their physician (CNS Spectr. 2006;11:501-8). Another study of patients with psychogenic nonepileptic seizures showed that when patients were relieved at their diagnosis, they had much better outcomes than when they reported anger or confusion (Seizure 2003;12:287-94).

"Giving a PMD diagnosis is more helpful than not giving any diagnosis at all. That's more important than saying, 'You don't have XYZ,'" Dr. Stone said. "I think when you can try to pick apart the reasons why [presenting the diagnosis] can go wrong, it helps you to navigate around those reasons."

He discussed some of the advantages and disadvantages to each approach:

► **Psychological explanation.** This approach may hasten patients' acceptance of the diagnosis as well as their ability to make links between their physical symptoms and emotions. There also is much more information available on the Internet that bases descriptions of PMDs on psychological theory. Patients may then more readily accept a referral for psychological treatment to improve their condition, Dr. Stone said.

Dr. Anthony Lang, professor of neurology at the University of Toronto, said in a discussion at the meeting that he finds it "very useful to introduce the concept of neuropsychiatry to the patient. … It disturbs the current opinion of what psychiatry is to the patient and raises the idea that in fact psychiatrists deal with brain dysfunction."


ANTHONY LANG, M.D.

However, Dr. Stone noted that the psychological explanation could increase the likelihood that a patient will be concerned that the clinician thinks they are crazy or imagining or feigning their symptoms. This might erode the doctor-patient relationship and make it difficult to discuss even less controversial things during the visit.

► **Functional and mechanistic explanation.** An attempt to explain how a patient's symptoms have arisen may avoid the concerns that the patient has with a psychological explanation, while also leaving the door open to multiple potential causes of her symptoms, including psychological reasons, because this approach does not assume any particular etiology.

Some patients may view a description of their nervous system as malfunctioning, but undamaged, to be more reversible than a psychological problem that is rooted in the past, he said.

But the mechanistic explanation not only could delay a patient's appreciation of psychological factors and their need for treatment but also increase the likelihood of the patient interpreting the diagnosis as an organic disease.

► **'Medically unexplained' explanation.** "I don't think this [explanation] works very well," Dr. Stone said, because it is untrue to say that you don't know what it is if you do recognize it.

A randomized trial in the primary care literature found much better outcomes after 2 weeks if patients had been given a positive explanation for their unexplained symptoms, compared with those who had been told it was uncertain what condition they had (Br. Med. J. [Clin. Res. Ed.] 1987;294:1200-2).

► **Combined approaches to explanation.** If a physician plans on seeing a patient more than once, it may be best to use a functional and mechanistic explanation as a default in an initial appointment and then introduce psychological factors in a subsequent visit when the patient feels comfortable and knows that their symptoms are being taken seriously. A minority of patients who will accept a psychological explanation on the first visit may be identified by asking patients what they think is the cause of their symptoms.

But overall, a patient's acceptance of the diagnosis "may have more to do with the way you say it rather than what you say," suggested Dr. Stone, who disclosed that he has received honoraria in the form of travel expenses from Sanofi-Aventis and Janssen. ■

Calendar of International Events

2009

6th Congress of the European Federation of IASP Chapters (EFIC)
Sept. 9-12
Lisbon
http://www2.kenes.com/efic/Pages/Home.aspx

13th Congress of the European Federation of Neurological Societies (EFNS)
Sept. 12-15
Florence, Italy
http://www.kenes.com/efns2009

2009 World Congress on Huntington's Disease
Sept. 12-15
Vancouver, Canada
http://www.worldcongress-hd.net

134th Annual Meeting of the American Neurological Association
Oct. 11-14
Baltimore, U.S.A.
http://www.aneuroa.org/2009_Baltimore

19th World Congress of Neurology
Oct. 24-30
Bangkok, Thailand
http://www.wcn2009bangkok.com

The Sixth International Congress on Vascular Dementia
Nov. 19-22
Barcelona
http://www.kenes.com/vascular

XVIII WFN World Congress on Parkinson's Disease and Related Disorders
Dec. 13-16
Miami Beach, U.S.A.
http://www.kenes.com/parkinson

2010

3rd International Congress on Gait & Mental Function
Feb. 26-28
Washington, D.C., U.S.A.
http://www2.kenes.com/gait/pages/home.aspx

6th World Congress for NeuroRehabilitation (WCNR2010)
Mar. 21-25
Vienna
http://www.wcnr2010.org/

14th Congress of the European Federation of Neurological Societies
Sept. 25-28
Geneva
http://www2.kenes.com/efns2010/Pages/home.aspx

7th World Stroke Congress
Oct. 13-16
Seoul, Korea
http://www2.kenes.com/Stroke2010/Pages/Home.aspx

MEETING ROUND-UP

Hausmanowa-Petrusewicz Honored

BY ALAN McCOMAS, M.D.

Brain stimulation is one of the most exciting and scientifically rewarding areas of neurological research, and it was therefore fitting that it was chosen as the topic for the 102nd International Centre for Biocybernetics Seminar held in Warsaw on May 11-13 to honor the noted Polish neurologist, Prof. Irena Hausmanowa-Petrusewicz. The conference was sponsored by the Polish Academy of Sciences through the Institute of Biocybernetics and Biomedical Engineering.

It was a special honor for the attendees that Prof. Hausmanowa-Petrusewicz was also one of the chairs, the other being myself. She began her medical studies in Warsaw and returned to that city after World War II to commence with her neurological training.

After receiving a DSc in 1951, she began her illustrious research career in neuromuscular disorders that saw her become a world authority on spinal muscular atrophy during a career that has spanned almost 65 years. As head of the department of neurology in the Warsaw Academy of Medicine, Prof. Hausmanowa-Petrusewicz trained more than a hundred neurologists and supervised many graduate students. She retired from her university position in 1988, and currently directs the Division of Neuromuscular Diseases of the Polish Academy of Sciences.

The conference began with a survey of biomagnetism and bioelectricity in the animal kingdom presented by Adrian Upton (Hamilton, Canada). Then followed historical reviews of brain stimulation by Roger Lemon and John Rothwell (both of London), and an analysis of transcranial magnetic stimulation (TMS) effects on cortical circuitry by Robert Chen (Toronto). Vahé Amassian (New York) described how, by using TMS to temporarily block function, he and Ivan Bodis-Wollner (New York) had been able to deduce the time spent in different cortical and subcortical areas when a word was read and then quickly spoken.

About half of the remaining papers dealt with TMS, including its application to evaluating motor pathways in spinocerebellar ataxia (Maria Rakowicz, Warsaw) and, via the motor cortex, to the treatment of chronic pain (Jean-Pascal Lefaucheur, Rechdi Ahdab, and Daniel Ciampi de Andrade [Créteil, France]). Sergei Nikitin, Alexey Kurenkov, and Ada Artemenko (Moscow) covered using TMS to evaluate cortical excitability in migraine, and I reported unique findings with TMS in a patient with a severe and complex form of this condition.

Maria Rakowicz and Jakub Antczak (Warsaw) reported how they used repetitive TMS, as opposed to single-shock, to treat sleep disorders in parkinsonism, and Stefan Rowny and Sarah Lisanby (both of New York) discussed using the same modality to treat depression. Andres Lozano (Toronto) and his team obtained impressive results, also for depression, by using implanted electrodes in the anterior cingulate gyrus.

Several Polish groups presented papers on deep brain stimulation. Miroslaw Zabek and Michal Sobstyl (Warsaw) reported impressive results using bilateral pallidal stimulation in dystonia and subthalamic nucleus stimulation in advanced parkinsonism. The subthalamic nucleus was also the target in parkinsonian patients treated by Tomasz Mandat, Henryk Koziara, Pawel Nauman, Tomasz Tykocki, and Wieslaw Bonicki (Warsaw), who reported good results with DBS as therapy for dystonia.

Movement disorders were also the subject of a presentation by Mark Hallett (Bethesda, Md., U.S.A.), who had used TMS to investigate the cortical pathophysiology of parkinsonism and focal hand dystonia. In another talk, Prof. Hallett showed how TMS could be used to study cortical plasticity in a variety of neurological disorders.

Among other presentations, Dr. Upton reviewed his pioneering results in epilepsy with feedback stimulation, and then with vagal, cerebellar, and deep brain stimulation. Robert Fischell (Baltimore, U.S.A.) demonstrated the use of a hand-held magnetic stimulator he had designed and that he said had been used successfully in migraine patients. He also reported on a self-contained device small enough to be implanted in the skull and capable of detecting and arresting incipient seizure activity. Jean Delbeke (Brussels) described a different application of brain stimulation: to elicit spatially distinct phosphenes by optic nerve stimulation in blind patients.

A notable feature of the meeting was the quality and excellence of the discussions. And finally, it would be remiss not to mention the superb social program our Polish hosts organized for us, including a performance of Verdi's Rigoletto at the National Opera House. ■

COURTESY DR. MARK HALLETT

Prof. Hausmanowa-Petrusewicz, the honoree, and the author, Dr. McComas.

DR. MCCOMAS is professor emeritus in the department of medicine and the division of neurology at McMaster University, Hamilton, Canada. He was founding head of the neurology division, where he is still a researcher. He is currently finishing a history of neurophysiology.

Travelling Fellow: Learning Excursion to Seattle

BY ERIK GUEVARA SILVA, M.D.

I used my Junior Travelling Fellowship from the World Federation of Neurology to attend the 2009 annual meeting of the American Academy of Neurology in Seattle, U.S.A.

At a colloquium titled "Critical Thinking for Critical Issues," I learned much about managing a neurology practice, including setting up an electronic health record system. Although it was impossible to cover all of the scientific platform and plenary sessions, I gained new insights, knowledge, and skills from each session I attended.

I also participated in a course on infections of the nervous system, directed by Dr. Russell E. Bartt of Rush University Medical Center in Chicago, U.S.A. I now have a better understanding of the diagnostic work-up for central nervous system tuberculosis and of the different manifestations of neurosyphilis, both common and serious public health issues in Peru.

Dr. Silva is a resident in neurology at the National Institute of Neurological Sciences in Lima, Peru.

Dr. Bruce A. Cree, of the University of California, San Francisco, conducted a course in multiple sclerosis, where I learned about new therapies for MS, at what stage they should be started, and how to differentiate demyelinating disease subtypes.

The nine poster sessions provided a good opportunity to interact with residents and fellows from various countries, and I was encouraged to prepare a poster for next year's meeting in Toronto.

On my return, I did a presentation for my colleagues to share with them what I had learned at the meeting.

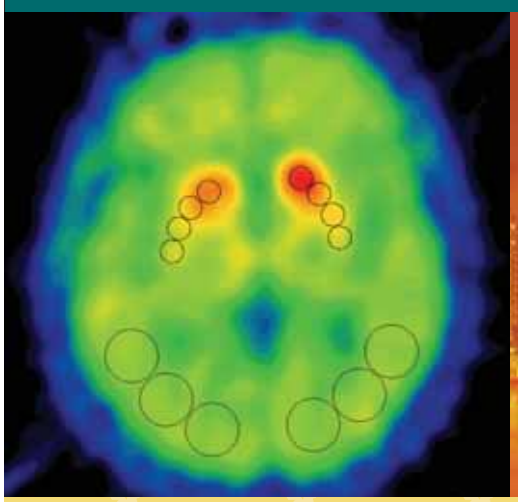
I hope to be able to travel to other international meetings in the future. ■

XVIII WFN World Congress on

Parkinson's Disease and Related Disorders

Improving long-term outcome

50th ANNIVERSARY OF THE WFN RESEARCH GROUP ON PARKINSONISM AND RELATED DISORDERS



Miami Beach, Fl, USA, December 13-16, 2009

Join over 3,000 international clinicians, researchers and allied healthcare professionals at this biennial congress, which this year celebrates half a century as a leading international summit on scientific progress in discovering real solutions for Parkinson's patients.

Congress Highlights:

- Multi-disciplinary scientific programme
- Latest information on the etiology, pathophysiology & treatment
- Lectures by international experts
- New reports from clinical researchers & basic research laboratories

For more information about CMEs, CEUs and to Register

visit: www.kenes.com/parkinson

Congress Secretariat

KENES International
CARES FOR YOUR ORGANIZATION

1-3, Rue de Chantepoulet, P.O. Box 1726 CH-1211 Geneva 1 Switzerland
Tel: +41 22 908 0488, Fax: +41 22 906 9140, E-mail:parkinson@kenes.com

Jointly Sponsored by USF Health and the World Federation of Neurology (WFN) Research Group on Parkinsonism and Related Disorders

USF HEALTH

After Independence, Expansion

Swiss • *from page 1*

which was renamed Société Française de Neurologie in 1949. In 1907, the Gesellschaft Deutscher Nervenärzte and the Società Italiana di Neurologia were founded.

At the first SNS meeting in Berne, the attendees adopted the new society's goals, which were to promote neurology as a science and maintain close ties between it and related fields such as anatomy, physiology, internal medicine, surgery of the nervous system, psychology, and psychiatry; the cultivation of personal relations between the society's members; and the promotion and representation of the practical interests of neurology such as the development of neurological training and research.

The members met regularly until World War I broke out in 1914. After a hiatus of 2 years, they met again in Berne. At that meeting, von Monakow and Dubois resigned and were elected honorary presidents. It was the last SNS meeting to have its minutes published in the Correspondenzblatt für Schweizer Aerzte, after which reports were published in the Swiss Archives of Neurology and Psychiatry.

The International Platform

In 1928, the American Neurological Association asked the SNS to stage the 1st International Neurological Congress (INC) in Berne in the fall of 1931, marking the society's debut as a player on the international society forum.

The unfavorable standing of neurology vis-à-vis psychiatry and internal medicine was high on the agenda for the first INC. Representatives from Germany, France, Austria, Czechoslovakia, the Netherlands, and the United States unanimously adopted the following resolution, proposed by the German neurologist Gottfried Foerster: "Neurology is today a fully independent specialty. Unfortunately, however, there are countries which do not sufficiently recognize this fact. This congress urges the relevant authorities of the countries in question to do their utmost to further the position of neurology."

At that time in Europe, neurology was an independent compulsory part of medical studies only in Russia, Bulgaria, Estonia, Romania, and Norway. The first INC was regarded as a step toward anchoring neurology as a specialty in its own right, in which Switzerland had played an important and honorable role. The congress is also regarded as the first in the history of the World Federation of Neurology, which was officially founded in 1957.

SNS meetings were held regularly during World War II, and it was also during this time that Mieczyslaw Minkowski was elected president of the society. The election of a Jew as president of the SNS was noted as proof of the society's "intrepidity and independence."

Before and during the war, many prominent German neurologists—Kurt Goldstein, Walther Riese, and Otto Löwenstein, among others—took refuge in Switzerland from persecution in their home country. The Archives played a special role during this time by being probably the only European neurological journal to continue publishing articles in German by a range of foreign, particularly Jewish, authors.

From 1950 onward, the SNS met twice yearly at meetings that were often staged jointly with foreign neurological societies. The first such joint meeting took place in July 1950 in conjunction with the Italian Neurological Society in Lugano, Switzerland, and the two societies held subsequent joint meetings in 1975 in Stresa, Italy, and 1980 in Sion, Switzerland.

The SNS held other joint meetings with societies from Britain, Belgium, the Netherlands, Germany, France, Austria, Poland, and Sweden. The main themes of the meetings reflect developments in the specialty over succeeding decades.

Merging the Academic and Clinical

In 1908, there were only two neurological outpatient clinics run on a private basis throughout Switzerland, one in Zurich and one in Basel, but no inpatient facility. Most internists and psychiatrists, including Auguste-Henri Forel in Zurich, were opponents of an independent status for neurology. As a result, in most Swiss university clinics, inpatient care of neurological patients and the teaching of neurology were in the hands of internists and psychiatrists until the mid-20th century, in time increasingly assisted by consultant neurologists.

The first independent neurological inpatient facility (12 general and 2 private beds) and thus neurological clinic in Switzerland, opened in Zurich in 1952 under Minkowski. Other neurological inpatient services that were still a part of medical departments opened in Basel in 1951, Geneva in 1953, Lausanne in 1954, and Berne in 1958. Non–university-affiliated neurological clinics with inpatient facilities were established in St. Gallen in 1972, Aarau in 1974, and Lugano in 1980. In a broader context, the first inpatient neurological clinic worldwide was opened in the United Kingdom in 1859 at the National Hospital for the Paralyzed and Epileptics in Queen's Square, London, and in France in 1862 at the Salpêtrière in Paris.

Today, there are five university hospitals in Switzerland with independent neurological departments (Geneva, Lausanne, Berne, Basel, and Zurich), three neurological departments at major regional hospitals (Aarau, St. Gallen, Lugano), and four neurological wards within the departments of internal medicine at regional hospitals (Lucerne, Münsterlingen, Winterthur, Sion).

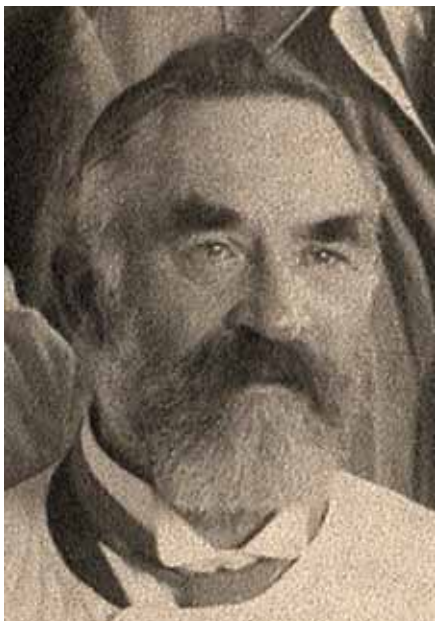
There is a limited number of independent neurological beds at the above hospitals—roughly 300—for a population of 7.5 million. This shows that a lot of neurological inpatients are still cared for by colleagues from internal medicine in cooperation with neurological consultants and that outpatient care for neurological patients is of particular significance.

All neurological departments have established stroke teams, but independent neurological intensive care units are still lacking. There are more than 20 neurorehabilitation hospitals in Switzerland, an indication of their growing importance.

Today, the neurological postgraduate education lasts a minimum of 6 years, that is, 4 years of clinical neurology, 1 year of clinical neurophysiology, and 1 year of training in internal medicine. Before practicing neurology, the candidate must pass a board examination that consists of a written and two oral examinations. Later, CME credits are required.

To perform neurophysiological tests, candidates must pass a separate examination. A candidate qualifies if she/he has had at least 9 months training at a certified institution and performed at least 800 EEGs (for the EEG certificate) or 500 ENMGs (or the ENMG certificate). The "certificate of qualification for cerebrovascular disorders" also requires 9 months of special training, as well as the proof of 500 ultrasound examinations performed by the candidate, who also has to pass written and oral tests. Without these certifications of qualification, the examinations will not be reimbursed by the insurance companies. ■

DR. WALDVOGEL *works in private practice at the Hirslanden Klinik St. Anna, Lucerne, and is a consultant in movement disorders in the department of neurology at the University of Zürich.* DR. VALKO *is a resident in neurology at the University of Zürich.* DR. BASSETTI *is director of the neurological outpatient clinics and vice-chairman of neurology at the University Hospital in Zürich. He currently serves as president of the Swiss Neurological Society and the European Sleep Research Society, and is the scientific director of the European Neurological Society Meetings.*



Constantin von Monakow is considered a pioneer in neurology in Switzerland.

Robert Bing convinced his peers of the need to form a neurological society.

PHOTOS COURTESY SWISS NEUROLOGICAL SOCIETY

LAYING THE FOUNDATIONS

Even before the SNS was founded in 1908, Swiss physicians and scientists had made important contributions to the clinical and experimental neurosciences. Among these noted pioneers were:

► **Johann Jakob Wepfer** (1620-1695), a physician and anatomist, who wrote a classic work on stroke titled "Apoplexia" (1658). He was the first to interpret stroke as the result of cerebrovascular disease and made a decisive contribution with anatomical, methodological, and clinical studies;

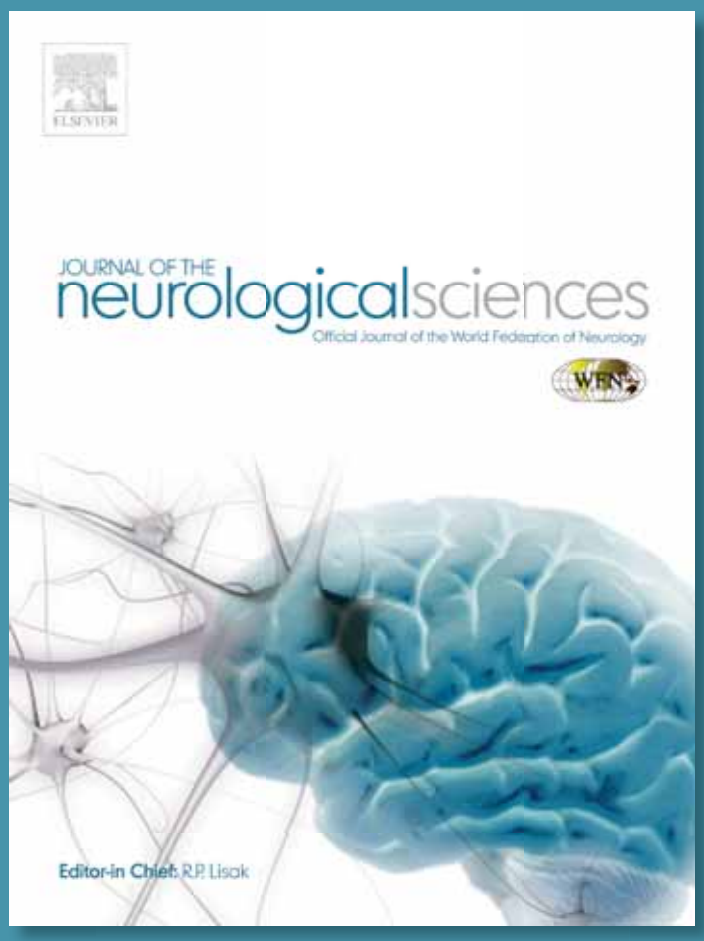
► **Albrecht von Haller** (1708-1777), a biologist and the pioneer of bioelectricity theory who introduced the terms stimulus, irritability, sensibility, and contractility. Daniel Bernoulli (1700-1782) and Charles-Gaspar de la Rive (1770-1834) also published important neurophysiological and experimental work;

► **Samuel Auguste André David Tissot** (1728-1797), who wrote a three-volume neurological handbook titled, "Traité des nerfs et de leurs maladies" (1778-1780), on pain and migraine, and a book, "Traité de l'Épilepsie" (1770) that contains clinical observations on epilepsy that are still valid today;

► **Wilhelm His** (1831-1904) an illustrious neuroanatomist, who was the first to describe nerve cell and nerve fiber as independent units;

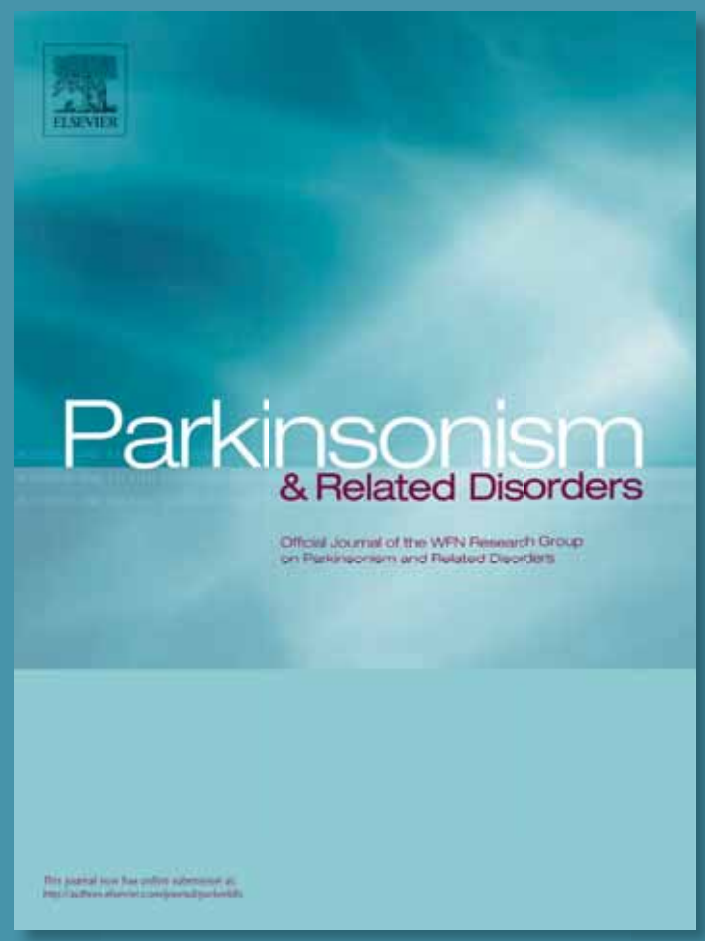
► **Constantin von Monakow** (1853-1930) epitomized the Zurich neurobiological school and ranked as one of the leading neuroscientists of his time. In addition to his monumental works, "Gehirnpathologie" (1897) and "Die Lokalisation im Grosshirn und Abbau der Funktionen Durch Kortikale Herde" (1914), he is considered the pioneer of Swiss neurology for many reasons. In 1886, he founded a private laboratory of brain anatomy, which ranked as the first scientific institution for neuroscience in Switzerland and became a cantonal university institute in 1910. In 1887, he founded, at his own expense, the first neurological outpatient clinic in Switzerland, which in 1913 became the University Policlinic for Nervous Diseases.

The ultimate resources to be kept up to date on the latest research in **Alzheimer's** and **Parkinson's Diseases**



Official Journal of the World Federation of Neurology

www.elsevier.com/jns



Official Journal of the World Federation of Neurology Research Group on Parkinsonism and Related Disorders

www.elsevier.com/prd

For immediate access to the journal articles, visit **www.sciencedirect.com**!

ScienceDirect™
makes sense.

PERSPECTIVE

A Canadian Neurologist in Laos

BY ROBERT LEE, M.D.

Dr. Lee is a professor emeritus and former chairman of the department of clinical neurosciences at the University of Calgary, Canada.

Since 1999, I have been spending a month or 2 each year working in Laos as a volunteer with a partnership program involving the University of Calgary (Canada), the University of Heath Sciences in Vientiane, the capital city of Laos, and the Lao ministry of health. The main objective of the program has been to produce physicians who have the specific knowledge and skills to deal with the health problems encountered in rural Laos.

Initially, the project focused on a major revision and modernization of the medical school curriculum. The school, which has been in existence for more than 40 years, had a curriculum modeled on European medical schools from the mid-20th century.

Teaching consisted almost entirely of lectures and was organized according to traditional disciplines, with little integration between the basic biomedical sciences and clinical medicine. Moreover, there was little emphasis on the country's most common medical problems.

The new curriculum has been in place for 6 years. It uses an interdisciplinary, systems-oriented approach, with the emphasis on clinical problem solving. The implementation has not been an easy task. Resources are very limited, class size has been increasing steadily, and the teachers are overworked and underpaid. Attempts to introduce small-group learning have met with limited success, and none of the students owns a textbook. Only a small percentage can read or speak English, but most Lao students can read Thai and a limited selection of Thai language textbooks is available.

Although very little of what I have been doing in Laos has involved wearing my neurology hat, I have worked with Lao teachers to develop the neuroscience components of the new curriculum and helped prepare them to teach medical students clinical skills, including the neurological examination. In a country that did not have a single neurologist until 2008, it was inevitable that I would be asked to see some patients, and I have had the opportunity to see patients with some unusual and fascinating neurological problems.

Over the past 5 years, I have also been working with colleagues from Calgary and Laos to develop a postgraduate training program in family medicine, a specialty that had been unknown in Laos where traditionally, doctors were sent to work in rural districts after completing medical school. In a way, this has taken me back to my roots as a rural family doctor in northern Ontario, where I spent some time early in my career before returning to Toronto to train in neurology.

The family medicine training program has been designed specifically to prepare doctors for work in the rural districts of Laos. The second year of training is spent in the provinces, of which 6 months is a community medicine experience.

During that time, the residents go in small groups of four or five to live in a rural community where they conduct a detailed survey of every household to identify the major health problems in the community and then work with the villagers to prioritize the problems and plan specific interventions.

I have had the opportunity to travel with some of my Lao colleagues to visit each group of residents while they are working in the villages and to review their progress. This has been a rewarding experience and has given me an appreciation of the health problems in a poor developing country, which I would otherwise not have gained had I worked as a neurologist at a large academic center.

As I have mentioned, when I first went to Laos in 1999, there was no neurologist or neurosurgeon in the entire country. There are now two neurosurgeons. One Lao doctor who had previously trained in internal medicine returned to Laos in the spring of 2008 after 2 years of neurology training at the University of Malaysia in Kuala Lumpur. A second Lao doctor is currently being trained in Kuala Lumpur and will return a year from now.

Diagnostic facilities in Laos are still very limited. There are four CT scanners in Vientiane, but because the cost of a scan is well beyond the means of most Lao families, many patients who require one do not have it done. Angiography is not available, either, and there is still no MRI scanner. Patients who can afford to might go to neighboring Thailand for an MRI.

Neurological and neurosurgical problems are common. In cities and towns, where most people travel by motorbike, serious head injuries have been a major concern. A helmet law was introduced recently, and members of the medical community hope it can be effectively enforced and the number of devastating motorbike related brain injuries reduced.

Stroke and brain tumors are also seen regularly, as are cerebral malaria and other CNS infections, which are common causes of death in children. And tuberculosis is still quite prevalent. During one visit, I saw four young people over a 2-week period with paraplegia, presumably due to spinal TB, although it is always difficult to confirm the diagnosis.

Epilepsy is well recognized and, particularly in the rural areas, is often untreated—even phenobarbital is not available in Laos. Other problems such as headache, dizziness, and psychogenic disorders are probably as prevalent as they are in developed countries.

I recall one case of headache in particular: I was visiting a Hmong village in a remote area of northern Laos near the Chinese border, where I happened to meet the wife of the village chief.

She was a delightful, hospitable woman who, when she learned I was a medical doctor, told me about her headaches that had been bothering her for some time. She had been to a traditional healer and to the hospital but had not obtained any relief. She was sufficiently concerned that she had decided to go to Vientiane to see a specialist. To cover the expenses of the journey, she was going to have to sell her water buffalo, one of her few material possessions.

After several minutes of history taking through an interpreter, a classic description of migraine emerged. I felt confident in reassuring her that she did not have any serious brain disease and left her with a small supply of acetaminophen—triptans are not available in Laos, but she would be able to get more acetaminophen at the local district hospital. I have not been able to obtain any follow-up, but hopefully she still has her prized buffalo and is not incapacitated by headaches or concerns about what might be causing them. ■

COURTESY DR. ROBERT LEE

A new family medicine program that trains Lao doctors to work in rural areas now includes a neuroscience component.

About Laos

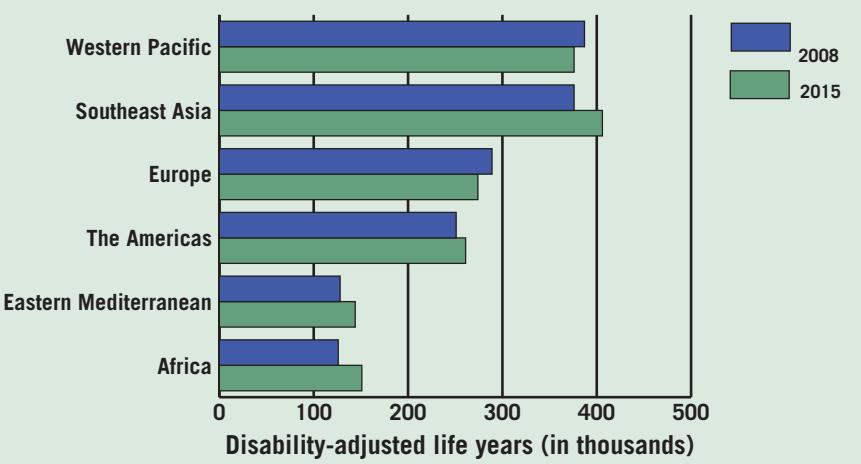
Laos is a small, mountainous, landlocked nation in Southeast Asia with a population of about 6 million, 85% of whom live in rural areas that are often quite remote from medical services. The largest city is its capital, Vientiane, with an estimated population of 210,000 in the city itself and some 700,000 in Vientiane Prefecture. There are 49 recognized ethnic minorities, many of whom speak their own language, which may be quite different from Lao, the national language.

By all criteria, Laos remains a very poor country. On the most recent United Nations Human Development Index, it was ranked 133 out of 177 countries. The GDP is estimated to be U.S. $490 per capita. Government salaries for physicians range from $60 to $90 a month.

The country is still suffering from the devastating effects of the war in Southeast Asia, which ended in 1975. Large areas of the countryside remain littered with cluster bombs which, despite the efforts of several international mine disposal projects, kill or injure many people each year.

DATA WATCH

Projected Years of Healthy Life Lost Due to Multiple Sclerosis



Note: Data are from "The Global Burden of Disease: 2004 Update."
Source: World Health Organization

ELSEVIER GLOBAL MEDICAL NEWS

Clinical Neurology News®

Presents

Developments in Migraine Therapy

Free podcasts let you hear the latest information on migraine headaches. Each podcast provides top news on headaches and an interview with a leading expert.

Podcast Episode 2: A Twelve-Month Study of the Tolerability and Safety of a Combination Treatment for Acute Migraine

With **Paul Winner, DO, FAAN**
Clinical Professor
Nova Southeastern University
Ft. Lauderdale, Fl.

This Podcast Also Features:

Ten Minutes of Exercise Reduces Chronic Pain

For free new **Developments in Migraine Therapy** podcasts, go to **www.clinicalneurologynewsnetwork.com/migraine** *or* subscribe by downloading iTunes® media player free from iTunes.com, select '**Podcasts**,' and enter '**Developments in Migraine Therapy**' into the Podcast Directory search field.

This program series is developed in conjunction with and sponsored by

gsk GlaxoSmithKline

www.clinicalneurologynewsnetwork.com/migraine

NEUROLOGICAL STORY

Friend, Mentor, and a Force in the Field

Fred Plum is a neurological icon who is known for his many contributions to our specialty. He was assertive and forceful—and authoritarian when he deemed it necessary. He was also brave and fearless. While he was chief of neurology at the University of Washington in Seattle caring for polio patients, he had himself curarized, catheterized, and placed in an iron lung so that he could experience their treatment firsthand. And, while studying cerebral circulation with the Kety-Schmidt technique, which involved catheterization of a carotid artery and jugular vain, he had that procedure as well for the same reason.

An encounter I shared with Plum at the University of California, San Francisco (UCSF) in the late 1960s, was a defining moment in what became a lifelong friendship and professional alliance between us.

BY ROBERT B. DAROFF, M.D.

Dr. Daroff is professor and chair emeritus of the department of neurology at Case Western Reserve University School of Medicine in Cleveland, U.S.A.

I finished my neurology residency at Yale University in New Haven, Conn., U.S.A., in 1965 and then spent 2 years of obligate military service with the U.S. Army. In academic year 1967-1968, I was a neuro-ophthalmology fellow under Dr. William F. Hoyt at UCSF. Sometime in early 1968, Dr. Robert A. Fishman, chair of neurology at UCSF, received a call from Plum, who was en route to Japan and faced a long delay in San Francisco. He asked Fishman if he could make rounds with the neurology residents. However, they had already started their afternoon clinic, so Plum ended up rounding with Fishman and the neuro-ophthalmology team—Hoyt, three fellows, and an ophthalmology resident.

The first patient we saw was a young encephalopathic African American woman from Oakland, across the bay from San Francisco. She was carrying a diagnosis of "subacute encephalitis," the term used at the time until it was later determined to be due to the herpes simplex virus. The woman's husband was standing at her bedside when we entered. He was a giant of a man, wearing a jacket with a Black Panther insignia. The Black Panther Party had been formed in 1966 in Oakland to uplift the black community and in so doing, achieve racial equality. However, unlike the nonviolent civil rights movement led by Martin Luther King Jr., the Black Panthers were aggressively militant and often at odds with the authorities.

Fishman asked the man if he would leave the room while we examined his wife. He responded, with great anger, that he would not, shouting, "You can do what you need to do, but I am going to stay here with my wife." It was a tense moment, and we fell into a general state of concerned inaction.

Plum then stepped forward, extended his hand, and said, "Sir, I'm Dr. Fred Plum from New York City. Your physicians are so concerned about your wife's health they asked me to see her, since I am an expert in this type of neurological problem. But please realize that we can't talk freely and openly amongst ourselves with you in the room. It is in your wife's best interest that you step outside. We'll be happy to speak with you when we are finished."

COURTESY JANET CHARLES

Dr. Fred Plum underwent procedures to understand his patients' experiences.

As Plum spoke, the man's eyes filled with tears and he said meekly, "I'm sorry; I was out of line. Please do what you can to help my wife." He left the room. Plum had swiftly and effectively redirected our attention to the patient. I was astounded by how bravely and graciously he had taken control during that tension-filled moment.

Several years later, when I was on the faculty of the University of Miami, Plum spent a few days with us as visiting professor. When I drove him back to the airport, I asked if he remembered the Black Panther incident. He recalled it vividly, and we discussed it at length. We subsequently became close friends, and, in addition, he became a strong active supporter of my career.

Plum often asked me to review articles for the Archives of Neurology, of which he was the editor. He appointed me to its editorial board in 1976. At that time, the Archives was owned by the American Medical Association and was the official journal of the American Neurological Association (ANA). For reasons best left for another forum, Plum and the entire editorial board, myself included, quit the Archives and founded the Annals of Neurology in 1977, which became the official publication of the ANA and the Child Neurology Society. When Plum instituted a Neurological Progress section in the Annals, he made me the founding editor.

At the 1985 World Congress of Neurology in Hamburg, Germany, Plum approached me at the opening banquet and asked if I would like to be the editor of Neurology, the official journal of the American Academy of Neurology.

"How about Bud?" I asked, referring to its editor at the time, Dr. Lewis Rowland. He replied that Rowland was finishing his 10-year term at the end of 1986, and that he (Plum) was chair of the search committee. I told him that I always thought of myself as an Annals person and had never considered a switch to Neurology. He then mentioned the names of several prominent neurologists who had applied for the position. I remarked that they were all fine academic neurologists who would serve the journal well. At this point, Plum did something emblematic of power and control. He grabbed and squeezed my upper arm and, addressing me by my last name, said, "Daroff, this isn't a pissing contest. This is what's best for American neurology. They aren't, and you are. Do you want the job?" Needless to say, I assumed the editorship when Rowland stepped down in January 1987.

I've had many wonderful mentors over the years to whom I am indebted, but none promoted me as actively as did Fred Plum. When I think about him and our relationship, my thoughts always return to the day he soothed the angry young Black Panther from Oakland. ■

Outcomes Could Be Improved

rTPA • *from page 1*

the guidelines highlight the importance of emergency department physicians weighing whether a patient should be treated with tPA. "The longer out you go, the more patients are being considered. It will have an impact simply by increasing the awareness among treating physicians that tPA is an option."

GREGORY J. DEL ZOPPO, M.D.

The additional exclusion criteria "make it more complex in terms of the decision making for physicians, who ideally would like to have one set of criteria to use to decide whether or not to treat," he said in an interview. Ancillary care for patients being treated in the extended period should also follow the 2007 guidelines (Stroke 2007;38:1655-711).

Dr. Broderick, who was not involved in the guidelines, disclosed that he is a primary investigator for the Interventional Management of Stroke III trial sponsored by the U.S. National Institute of Neurological Disorders and Stroke. Genentech, which markets alteplase as Activase in the United States, is supplying rTPA; and Concentric Medical, EKOS Corp., and Cordis Neurovascular, are supplying catheters for the trial.

The relative utility and efficacy of the treatment during the longer time frame, compared with other methods of thrombus dissolution, have not been well established and require further study, said Dr. del Zoppo of the University of Washington, Seattle, and associates.

The recommendation was largely based on data published in 2008 from ECASS III. In that multicenter, prospective, randomized, placebo-controlled trial, 418 patients were enrolled to best medical treatment with rTPA between 3 and 4.5 hours after stroke, and 403 to best medical treatment plus placebo. Exclusionary criteria were the same as the guidelines, as was ancillary care, except that patients received prophylactic anticoagulant therapy for deep vein thrombosis within 24 hours of receiving rTPA.

The treatment group received 0.9 mg/kg of alteplase to a maximum of 90 mg. Symptomatic intracranial hemorrhage, a common complication after thrombolysis, was diagnosed in 10 (2.4%) of the rTPA patients and 1 (0.2%) of the patients on placebo. This incidence was consistent with that in other trials, the authors wrote.

JOSEPH P. BRODERICK, M.D.

The frequency of the primary efficacy outcome—a score of 0 or 1 on the modified Rankin Scale score 90 days after rTPA treatment—was significantly higher in rTPA patients (52.4%) than in placebo patients (42.5%). In addition, there was no significant difference in mortality between the two groups, although it was slightly higher in the placebo group.

Dr. del Zoppo said he had no financial conflicts of interest. Some of the authors have received research grants or research support from Boehringer Ingelheim GmbH, Genentech, Novo Nordisk A/S, and Concentric Medical Inc.; one is on the speakers bureau or has received honoraria from Boehringer, and another is a consultant with Genentech. Boehringer Ingelheim markets alteplase as Actilyse outside of the United States and Japan. ■

Jeff Evans contributed to this article.

AEDs Linked to Bone Loss, Fracture Risk

BY SUSAN LONDON
Elsevier Global Medical News

SEATTLE — Older adults in the general population have an elevated risk of fractures related to osteoporosis if they take certain antiepileptic drugs, according to a population-based analysis.

"Studies have shown that antiepileptic drugs [AEDs] are associated with an increased risk of bone loss and fractures," Jane McChesney said at the annual meeting of the American Academy of Neurology. "But population-based data assessing the association between AEDs and osteoporotic-related fractures are scarce.

"This study found that AEDs, except for fatty acid derivatives, are associated with an increased risk of osteoporotic-related fractures in men and women over age 50," she said. "This is of concern as many of these AEDs are … also widely used in older adults for neuropathic pain, headaches, and psychiatric conditions."

In the study, Ms. McChesney, who is a nursing student at the University of Calgary, Alberta, Canada, and her colleagues analyzed population-based data from Manitoba province for the years 1996-2004.

Individuals were included in the study if they were at least 50 years of age and had continuous health care coverage during the study period. They were excluded if they had taken osteoprotective medications in the year before a fracture or were residents of long-term care facilities. Fractures were ascertained from diagnostic codes and were limited to vertebral, wrist, and hip fractures that were not related to severe trauma.

With the fracture date used as the index date, each older adult with a fracture was matched with three fracture-free older adults by age, sex, ethnicity, and number of comorbidities. Use of AEDs, defined as dispensation of a prescription to the individual in the previous 4 months, was assessed from a drug database containing pharmacy dispensations for the province.

IOANNIS TSIROPOULOS, M.D.

Analyses were based on 15,792 older adults who had had a fracture and 47,289 older adults who had not, Ms. McChesney said. Overall, 70% were female, 62% were aged 70 years or older, and 67% had three or more comorbidities. Fractures most commonly occurred in the wrist (52%), the hip (26%), and vertebrae (22%).

After adjustment for social and demographic characteristics, home care, and comorbidities known to affect fracture risk, older adults had elevated odds of fracture if they used carbamazepine (odds ratio, 1.9), clonazepam (1.3), gabapentin (1.6), phenobarbital (2.2), and phenytoin (2.1). In contrast, their odds were not elevated if they used valproic acid.

It is not known if osteoprotective agents are beneficial in this context, she conceded, and that would be an important focus of additional research. Ms. McChesney had no disclosures to make in relation to the study.

The study adds another piece of evidence to the issue of bone health with AED use, Dr. Ioannis Tsiropoulos said in an interview.

Other population-based studies on the same subject have been published (Epilepsia 2004;45:1330-7; Epilepsia 2008;49:2092-9; Neurology 2006;66:1318-24). The current study uses a similar design and methodology to analyze data from prescription and diagnosis registers.

The modest increase in fracture risk associated with any AED use shown in the present study confirms previous results. The same applies to risk estimates for individual AEDs, provided monotherapy results are reported.

However, risk with use of valproic acid was not significantly increased, contrary to findings in other studies (Epilepsia 2004; Neurology 2006), said Dr. Tsiropoulos of the department of clinical neurophysiology and epilepsies at St. Thomas' Hospital, London.

He questioned why the source population was restricted to older adults even though bone changes occur with AED use in children and younger adults. He also wondered why residents of long-term care facilities, who are expected to have a higher fracture risk, were excluded. The use of osteoprotective drugs also could have been treated as a confounder instead of as an exclusion criterion.

"Further research is needed. The increase in fracture risk with AED use hardly needs further confirmation. However, additional research may be warranted on the equivocal results of the parameters of AED use that may modify the risk, as well as mechanisms of action associated with risk modification by individual AEDs.

The study's result supports the notion that the effect of valproic acid on bone is not related to inhibition of liver enzymes, but rather to its activity as a histone deacetylase inhibitor (BMC Genomics 2007;8:362), a mechanism of action apparently shared by newer AEDs as well (Epilepsia 2004)," Dr. Tsiropoulos said. ■

Jeff Evans contributed to this article.

Oral Fingolimod Bests IFNbeta-1a in MS Study

BY SUSAN LONDON
Elsevier Global Medical News

SEATTLE — Treatment of relapsing-remitting multiple sclerosis with orally administered fingolimod results in a significantly lower annualized relapse, compared with interferon-beta-1a, based on the results of a phase III trial.

A significantly lower percentage of patients who received fingolimod at either of two dosages did not experience relapse in the international, randomized, double-blind, TRANSFORMS trial. However, safety concerns regarding two deaths from disseminated herpes zoster and herpes zoster encephalitis that occurred in the higher-dose fingolimod group will be addressed in a related ongoing study, said Dr. Jeffrey Cohen, a neurologist at the Cleveland Clinic.

Fingolimod, also known as FTY720, has two mechanisms of action: It promotes retention of lymphocytes in lymph nodes (away from the central nervous system), and it modulates sphingosine-1-phosphate (S1P) receptors in neural cells.

The researchers randomly assigned 431 patients to oral fingolimod 0.5 mg once daily, 425 to oral fingolimod 1.25 mg once daily, and 435 to intramuscular interferon-beta-1a (IFNbeta-1a) 30 mcg once weekly.

The patients were 36 years old on average, and two-thirds were women, Dr. Cohen reported at the annual meeting of the American Academy of Neurology. They had had MS for about 7.5 years on average, and their mean Expanded Disability Status Scale score was 2.2. Nearly half (45%) had not previously been treated with disease-modifying agents.

Long-term patient safety data will be decisive for accepting fingolimod as a first-line option in treating MS.

DR. HAVRDOVÁ

The annualized relapse rate at 12 months—the trial's primary endpoint—was 0.33 in the IFNbeta-1a group, 0.16 in the lower-dose fingolimod group, and 0.20 in the higher-dose group. This corresponded to a significant 52% and 38% reduction with fingolimod at the lower and higher doses, respectively.

The findings were essentially the same in per-protocol analyses, and in analyses restricted to treatment-naïve and treatment-experienced patients.

The percentage of patients who did not experience any relapses was significantly greater with lower-dose (83%) and higher-dose (80%) fingolimod than with IFNbeta-1a (69%).

On magnetic resonance imaging, compared with their counterparts treated with IFNbeta-1a, patients treated with the lower and higher doses of fingolimod had a smaller mean number of new or newly enlarged T2 lesions (1.5 and 1.4 vs. 2.1) and gadolinium-positive T1 lesions (0.23 and 0.14 vs. 0.51).

The percentage of patients who had a confirmed progression of disability did not differ between groups (8% with IFNbeta-1a and 6% with the fingolimod groups). Serious adverse events occurred in 6% of the IFNbeta-1a group, 7% of the lower-dose group, and 11% of the higher-dose group.

None of the patients treated with IFNbeta-1a developed bradycardia or atrioventricular block—known effects of the first dose of fingolimod—but 1% and 4% of those treated with lower- and higher-dose fingolimod did.

Localized skin cancers occurred in 0.4% of the IFNbeta-1a group, 1.4% of the lower-dose group, and 0.5% of the higher-dose group. Study drug discontinuation due to adverse events was more common with the higher dose of fingolimod (10%) than with the lower dose (6%) and with IFNbeta-1a (4%). The only deaths were the two in the higher-dose group.

An ongoing 2-year trial in which fingolimod is being compared with with placebo "will give us a much better indication of the benefit-risk profile," said Dr. Cohen, who disclosed that he has received personal compensation for activities with Novartis (make of fingolimod) and Biogen Idec (maker of IFNbeta-1a). Novartis Pharma AG in Basel, Switzerland, funded the study.

IFNbeta-1a in the TRANSFORMS trial and the current first-line disease modifying drugs interferon-beta and glatiramer acetate have shown treatment results consistent with the first pivotal trials and favorable long-term safety, but there are still unmet needs in MS. Adherence to injections is decreasing over time, and the need for greater efficacy is constantly present, Dr. Eva Havrdová of the department of neurology at Charles University, Prague, said in an interview.

"There are several oral drugs in the [pipeline], fingolimod being one, from which a lot is expected. The safety profile and possible prevention of side-effects must be clearly communicated to both patients and neurologists, with the need for more education in the field of neuroimmunology.

"Further safety data from long-term monitoring of patients from all these trials will be decisive for accepting fingolimod—as well as other oral drugs—as a first line option in MS," said Dr. Havrdová, who is a primary investigator in a placebo-controlled study of fingolimod and has received educational grants and speakers honoraria from Biogen Idec, Bayer, Teva, and Serono. ■

Jeff Evans contributed to this article.

FROM THE JOURNAL OF THE NEUROLOGICAL SCIENCES

Neurological Complications in Lung Transplantation

BY ALEX TSELIS, M.D., PH.D.

Organ transplantation is a well-established treatment for several otherwise fatal diseases but it is very invasive, both surgically and physiologically, and can result in a number of complications. Transplants have been performed for more than a half century, and some of us might recall the international excitement when the first human heart transplant was performed in December 1967.

By today's standards, those early procedures were primitive, and the clinical management crude. The prominence of neurological complications was evident from early on, though with more procedures being done for more diseases, the availability of more intensive and selective immunosuppression, and improved perioperative support, the spectrum of complications has changed over the years.

This is especially true for the neurological complications of transplants. After these procedures, the nervous system is easily perturbed in a number of ways, which could include the effects of the surgical procedure, concomitant diseases, neurotoxicity of medications, opportunistic infections from the immunosuppression, and so on. As the science of transplantation evolves, so do the complications, and updated reports on them remain relevant and valuable.

SASA A. ZIVKOVIC, M.D.

We look to the large transplant centers for the data to define the current spectrum of neurological complications in transplant patients, and a recent report from Dr. Sasa A. Zivkovic of the University of Pittsburgh Medical Center, U.S.A., and his colleagues, gives a practical and useful overview of the neurological problems faced by lung transplant patients (J. Neurol. Sci. 2009;280:90-3).

Neurological problems occurred in 68% of 132 consecutive lung allograft patients at the center. Most involved impairment of consciousness (25%), neuromuscular problems (21%), and headaches (20%). Of note was that only 8% of the patients had seizures and 7% had cerebrovascular complications. Most of the encephalopathic complications were toxic-metabolic—often a result of the medications, especially tacrolimus—and hypoxia.

Neuromuscular complications were also surprisingly common, occurring in 21% of patients, and had many causes. Diabetic and medication-associated polyneuropathies were most common, followed by mononeuropathies, and a few plexopathies. Some myopathies were noted, mostly because of critical illness myopathy.

Neurotoxic effects of immunosuppressive medications were more common, occurring in 17% of patients, than were opportunistic infections—both systemic and in the nervous system—which occurred in 11% of the patients.

The authors emphasized the multifactorial nature of many of these problems, which can be caused by several factors.

The paper gives a clear and detailed catalog of the authors' extensive experience and emphasizes the changes that have occurred over the years.

The first author, Dr. Zivkovic, is from Zagreb, Croatia, where he went to medical school. He did his neurology residency and a fellowship in clinical neurophysiology at UPMC. During his training in neuromuscular disease, he evaluated transplant recipients and developed an interest in the complexities of their neurological problems. He continues to work with transplant patients and is proceeding in several projects, including research on other peripheral neuropathies and amyotrophic lateral sclerosis. ■

DR. TSELIS is an associate professor of neurology at Wayne State University in Detroit, U.S.A. He is the book review editor for the Journal of the Neurological Sciences.

PD Textbook Gets Update

Parkinsonism & Related Disorders
edited by Erik Wolters, Teus Van Laar, and Henk Berendse
(Amsterdam: VU University Press, 2008)

The contributors to this textbook include neurologists, neuroscientists, neurosurgeons, neuropsychologists, and psychiatrists, and it is this range and variety of expertise in the field of neurological movement disorders that ensures an informative and balanced final product.

The four main sections of the book—basic information, parkinsonism, related disorders, and diagnostic procedures—deal with etiology, pathophysiology, pathology, and the signs and symptoms of the various disorders.

BY DANIEL TRUONG, M.D.

Dr. Truong is head of the Parkinson and Movement Disorder Institute at Orange Coast Memorial Hospital in Fountain Valley, Calif., U.S.A. which he founded and where he practices as a neurologist.

The chapters on diagnostic procedures include practical information on genetics, clinical examination, clinimetrics, neuroimaging, and clinical neurophysiology as well as differential diagnostic problems, and the information is enhanced by the inclusion of in-depth discussions of pharmacotherapeutic and neurosurgical strategies.

The book comes with a CD-Rom with 47 video clips of different movement disorders. The beauty of these video clips is that they allow copying so that they can be also easily inserted into PowerPoint for presentation.

Unfortunately, some of the video clips are soundless or in Dutch, which makes it difficult for those who can't speak Dutch to understand the significant points.

For the ease of the viewer, the author might consider separating sections of the video of the neurosurgical intervention so that the pre- and post-operative differences can be seen without having to refer back to the book.

Overall, this book will be an excellent, practical source for medical and allied health professionals who treat patients who are suffering from these diseases. ■

Quality and Vitality Define a Successful Year for JNS

The Journal of the Neurological Sciences enjoyed another year of dramatic growth, with a 20% increase in submissions. This growth is reflected in the overwhelmingly positive responses we received from the Author Feedback Programme published in March 2008.

More than 86% of the authors who were surveyed indicated that they were satisfied overall with the journal. When asked if they would recommend JNS, a typical response was, "The journal has an international editorial board, a good impact factor, and reputation. Furthermore, the journal services are good."

BY ROBERT P. LISAK, M.D.

Dr. Lisak is Editor-in-Chief of the Journal of the Neurological Sciences. He is a professor and the chair of neurology at Wayne State University in Detroit, U.S.A.

The journal's broad scope includes studies in neuromuscular diseases, demyelination, dementia, infections, stroke and cerebral circulation, degenerative diseases, neoplasms, and metabolism in both clinical neurology and the basic sciences.

The vitality of the journal is reflected in both the evolving profile of the contributors, 24% of whom are under the age of 35 years, and the changing demographics of the contributors and reviewers.

The five leading countries in submissions remain the United States, Japan, China, South Korea, and Italy, but the significant increases in submissions from regions including Africa, Egypt, Iran, Jordan, Lebanon, Palestine, Qatar, the Russian Federation, Saudi Arabia, and Sri Lanka indicate a trend in the journal's expanding global presence and impact.

An increasing number of these readers access JNS online through ScienceDirect, where the average number of monthly downloads for the journal has exceeded 35,000.

Special issues are a regular feature of JNS and are designed and conceptualized to highlight the latest developments and research on a theme. This year, the journal's focus was multiple sclerosis. Guest editors, O.R. Hommes and M. Friedrichs oversaw the publication of papers presented at two European Charcot Foundation symposia in 2006 and 2007, entitled "Mending the Brain: Stem Cells and Repair in Multiple Sclerosis" and "Treatment Targets in Multiple Sclerosis: The Ends and the Means."

A representative selection of articles includes: "Regeneration and Repair in Multiple Sclerosis: The View of Experimental Pathology" (W.F. Blakemore, United Kingdom); "Is it Clinically Relevant to Repair Focal Multiple Sclerosis Lesions?" (G. Comi, Italy); "Neuronal Repair and Replacement in Spinal Cord Injury" (F.M. Bareyre, Germany); "Plasticity and Remodeling of Brain" (M. Chopp, Y. Li, and J. Zhang; U.S.A.); "Immunomodulation by Neural Stem Cells" (T. Ben-Hur, Israel); "Can We Pass From the Experimental to the Clinical Phase in MS Stem Cell Research?" (O.R. Hommes, The Netherlands); "Central Nervous System-Directed Effects of FTY720" (V.E. Miron, A. Schubart, and J.P. Antel; Canada, Switzerland); and "The Effects of Natalizumab on the Innate and Adaptive Immune System in the Central Nervous System" (O. Stüve, U.S.A).

JNS will aim to set new milestones for 2009. ■

WORLD NEUROLOGY FOUNDATION

Tool Kits Help With Screening in African Clinics

BY DIANA M. SCHNEIDER, PH.D.

In 2006, the World Neurology Foundation, the U.S.-based charitable arm of the World Federation of Neurology, launched its Africa Initiative in response to requests from African neurologists who were in need of basic medical equipment for performing a neurological examination.

Backed by sponsorship from individuals, neurological societies, and companies, the Foundation produced tool kits that contained a 128-Hz tuning fork, a stethoscope, scissors, a collapsible Queen Square reflex hammer, a pen light, a National Institutes of Health stroke scale, and a Snellen eye chart, all of which are stored in a portable case.

The first kits were distributed in June last year in Dakar, Senegal, during a regional teaching course that was cosponsored by the European Federation of Neurological Societies, the International Brain Research Organization, and the WFN.

At the Dakar meeting, attendees from 15 countries, including the Democratic Republic of Congo, Burundi, Burkina Faso, Mali, and Guinea, received 52 kits. In November, the Pan African Association of Neurological Sciences (PAANS) distributed nine kits at its congress in Yaoundé, Cameroon.

Other kits have since been distributed to neurologists practicing in Nigeria, Togo, and Zambia. Ethiopia received 28 kits in May this year.

To date, the foundation has distributed 102 kits. Its goal for 2009 is to distribute 200 kits, with the next shipment intended for Uganda.

The tool kits are used by both neurologists and other health care providers, many of whom work in isolated rural areas.

Many of the sponsors have received messages from recipients of the kits thanking them for the valuable contribution. (See photo at right.)

The World Neurology Foundation, founded in 1999 by the then-President of the WFN Dr. James Toole, is committed to helping support the critical educational activities of the Federation.

Specifically, the Foundation's mission is to improve neurological care in developing countries worldwide.

In Africa, the Foundation is working to achieve this goal by also developing educational programs for neurological caregivers.

For more information regarding the World Neurology Foundation and its programs, or to learn more about tool kit sponsorship opportunities, visit the WFN Web site www.worldneurology.org, or contact Dr. Carrie Becker, Executive Director, at +1-802-558-1640. ■

DR. SCHNEIDER *is president and publisher of DiaMedica Publishing, New York, whose books focus on a range of health and patient education topics. She is a neurochemist by training and is on the Public Relations Committee of the WFN and a member of the board of the World Neurology Foundation.*

It was with great pleasure and excitement that I received one of the Neurology Tool Kits offered by the World Neurology Foundation during the 18th PAANS Congress in Cameroon in November 2008.

I am a physician working in the Batibo Health District, which is a high epilepsy prevalence area in Cameroon. I am also in charge of the noncommunicable disease and HIV clinics, where we follow up patients with a myriad of neurological complications daily.

Thanks to the kit, I have been able to better screen for neuropathies in our HIV and diabetic patients, as well as better examine our stroke patients. The tool is also going to be very useful once we start community-based epilepsy care in our health district. Using this kit has been a whole new experience in neurology and has reinforced my interest in this discipline and my commitment to [provide] a better quality of care for our patients.

Samuel Anye Angwafor, M.D.
Batibo District Hospital, Cameroon

COURTESY DR. SAMUEL ANYE ANGWAFOR

Dr. Samuel Anye Angwafor uses one of the tool kits during a neurological examination.

Plasmid VEGF Shows Promise for Diabetic Neuropathy

BY HEIDI SPLETE
Elsevier Global Medical News

Plasmid vascular endothelial growth factor gene transfer by intramuscular injection improved neuropathic symptoms in patients with diabetic neuropathy after 24 weeks, based on results of a randomized trial of 50 adults.

There are many causes of diabetic neuropathy, but experimental models have shown that injecting plasmid (nonvector) vascular endothelial growth factor (VEGF) into the muscle adjacent to nerve trunks has a positive effect on large peripheral nerves by improving blood flow, clinical function, and electrophysiological function, and by restoring microcirculation.

In this study, Dr. Allan Ropper of Brigham and Women's Hospital, Boston, and colleagues conducted a blinded, randomized trial to determine whether VEGF gene transfer would improve not only symptoms, but also clinical and nerve conduction measures.

A total of 39 patients received three sets of intramuscular injections of plasmid VEGF every 2 weeks, and 11 patients received a placebo. These participants were free of cancer and active retinopathy, which are at risk for VEGF therapy. Both types of injections were given at eight standardized sites adjacent to the sciatic, tibial, and peroneal nerves on one leg. The researchers measured patients' sensory, motor, and reflex scores, as well as nerve conduction velocities and quantitative sensory characteristics, at baseline and at 4, 24, and 52 weeks in both the treated and untreated legs.

At 24 weeks—the designated time for primary outcome measurement—the symptom scores were significantly improved in the treatment group, compared with the placebo group. The average change in symptom score was –1.21 in the VEGF patients, compared with –0.91 in the placebo patients, and this difference was significant after controlling for any change in the untreated legs in both groups.

In addition, the visual analog pain scores were significantly better in the treatment group, compared with the placebo group (–1.47 vs. –0.47). Nerve conduction studies, quantitative sensory testing, and measures of sensory and motor scores improved in the treatment group vs. the placebo group, but the difference was not statistically significant.

After 52 weeks, 21 serious adverse events were reported in the treatment group and 2 were reported in the placebo group. "Most of the vascular events were in the untreated leg," Dr. Ropper said in an interview before the study was presented at the annual meeting of the American Academy of Neurology.

Adverse events included congestive heart failure, severe asthma, calf claudication, and diabetic foot infections.

CHAUR-JONG HU, M.D.

The study was limited by its small size due to the rigid participation criteria, Dr. Ropper said. The expectation of improvement was low for most of the patients in this study, he explained. "The next trial should enter patients with less severe axonal neuropathy, so there is at least a prospect of change."

A larger trial with a single dose or with one agent (VEGF-1 or VEGF-2) is needed before this procedure might be considered as a mainstream treatment for diabetic polyneuropathy, added Dr. Ropper, who had no financial conflicts to disclose.

Many clinical trials for the treatment of diabetic neuropathy are currently in progress, each with diverse application rationales, study end points, and evaluation methods. Given the complexity of this disease, however, most of the trials have shown benefits only on symptoms such as neuropathic pain—the most common concern for patients with diabetic neuropathy—without affecting the underlying electrophysiological parameters. This suggests that disease-modification therapy toward diabetic neuropathy still remains unsuccessful, Dr. Chaur-Jong Hu of the department of neurology at Taipei Medical University Hospital and Shuang Ho Hospital, Taipei, Taiwan, said in an interview.

Rescue of microcirculation in peripheral nerves may play a pivotal role in treating diabetic neuropathy. However, the treatment may be initiated too long after the time at which nerve or neuronal damage might be reversible. So VEGF gene therapy, expected to be a disease-modifying treatment, should be given to patients at an earlier stage during the disease progression, leaving symptomatic therapies as the second-line treatment, said Dr. Hu. ■

Jeff Evans contributed to this article.

Welcome
to the

19th World Congress of Neurology

24 - 30 October 2009
Bangkok, Thailand

"Innovation in Neurology"

www.wcn2009bangkok.com