European Federation of Neurological Societies (EFNS)

The EFNS was founded in 1991 in Vienna, Austria. The role of the EFNS is:
- To advance the development of neurology as an independent specialty caring for all patients with a disease of the nervous system
- To support that these services become available to all Europeans
- To support research and dissemination of research results throughout Europe
- To organise and support neurological teaching at the pregraduate as well as the postgraduate level throughout Europe
- To handle the current political issues in European neurology on behalf of its members.

The EFNS is a federation of 44 European national neurological societies, 8 associate member societies and welcomes individual members from all over the world. The federation is governed by a Council constituted of one representative elected by each affiliated national neurological society in Europe.

The Council delegates the day-to-day management of the EFNS the Management Committee, empowered to decide on all matters of the Federation when such decisions cannot be delayed until the next Council meeting. Important decisions made by the Management Committee must subsequently be ratified by the Council.

The European Federation of Neurological Societies is based in Vienna, Austria. We also have Branch Offices in Florence, Italy, and Prague, Czech Republic.

Committees and Scientist Panels:
The EFNS has 8 standing committees and 24 Scientist Panels. The standing committees perform the ongoing functions vital to the EFNS on a long-term basis:
- Congress Programme Committee
- Training and Education Committee including the CME, E-learning and Teaching Course Sub-committees
- Liaison Committee
- Scientific Committee

The aims of the scientist panels are:
- to co-ordinate clinical research at a European level
- to disseminate good neurological practice throughout European countries
- to assist the Congress Programme Committee in organising congresses
- to assist the EFNS in training neurologists and in supporting continuing medical education.
- to develop European Neurological Guidelines

Topics:
- Amyotrophic Lateral Sclerosis
- Autonomic Nervous System disorders
- Critical care
- Dementia
- Demyelinating diseases
- Epilepsy
- Genetics
- Headache
- History
- Infectious diseases
- EFNS/MDS-ES
- Muscle disorders
- Neuroimaging
- Neuro-immunology
- Neuro-ophthalmology
- Neuro-oncology
- Neuropathic pain
- Neuropathies
- Neurorehabilitation
- Neurotraumatology
- Palliative care
- Public health
- Sleep disorders
- Stroke
- Substance abuse.

Congresses and meetings:
At its annual congresses, usually taking place in September, the EFNS provides an unmatched opportunity for neurologists to join over 5,000 colleagues to study and disseminate the latest research, clinical practices and treatments.

- 15th EFNS Congress, Budapest, Hungary 10-13 September 2011
- 16th EFNS Congress, Stockholm, Sweden 8-11 September 2012
- 17th EFNS Congress, Istanbul, Turkey Autumn 2014

Furthermore, the EFNS organises Regional Teaching Courses in Eastern Europe as well as in Africa. At these courses participants only pay for travel and accommodation. EFNS-RTCs are specially designed to disseminate best neurological practice directly to the countries in the East so that younger neurologists do not have to travel long distances to congresses which may not be affordable for them. RTCs provide basic teaching in neurology and contribute to the development of collaboration and friendship between neurologists in different European countries.

At the annual EFNS Academy in Czech Republic, 120 young neurologists from all over Europe meet and listen to contributions by European experts. Participants only pay for their travel.

Grants and Awards
Bursaries to EFNS Congresses:
The EFNS offers up to 200 bursaries consisting of free registration to the congress and hotel accommodation for four nights to European neurologists up to the age of 35 who are not yet in permanent positions and whose abstract has been accepted for presentation at the congress.

Department-Department co-operation programme
Up to 80 young neurologist per year, each receive a grant of €1500 plus travel expenses up to €300. The purpose of this award is to support their board and accommodation expenses in the host city. The grant is designed to allow for a visit of up to six weeks. If a participant is able to accept a lower budget board, it may be possible to stay longer than six weeks in the hosting department. Candidates from all European countries are eligible. Applicants must be under the age of 40, and must be fluent in English or in the local language.

Fellowship programme
The EFNS offers up to 10 scientific and 5 educational fellowships per year to support young European neurologists to carry out research projects in clinical and basic neurology.

The objective is to support young and active neurologists wishing to expand their knowledge in neurology by working on scientific projects, and most of all, to study the practice of neurology in different countries, and thereby also create new international connections. Accordingly, the research work must be carried out at a European academic neurological department outside the country of residence.

Amount: Net salary in accordance with the salary scale of the host institution up to a maximum of €2,000 per month plus travel expenses.

Investigator award:
All free presentations (short communications, posters), selected for presentation at the annual EFNS Congress automatically
compete for an Investigator Award. The EFNS Scientist Panels are responsible for the evaluation process (independent from other awards and the programme organisation). The award for each selected presentation will be €500, a diploma, and the winners will be announced in the European Journal of Neurology and the EFNS Newsletter. The award will be given to the first author who needs to be the person to present the work at the congress.

**Tournament for young neurologists**

A tournament for young neurologists takes place at each EFNS Congress. It will be carried out in two groups, one on clinical related research, and one on basic neurological science. Neurologists in training not older than 35 years are entitled to participate. The Congress Programme Committee will select 6 candidates for each tournament on the basis of the contents of the abstracts submitted. The clinical subjects should be received from authors who work and carry out their projects in Europe. Candidates selected for the tournament receive a bursary consisting of free registration to the Congress, up to four nights hotel accommodation, and a travel grant.

**Prize:** The winner of each group will receive the Uschi Tschabitscher Prize for Young Neurologists consisting of Free registration at the upcoming EFNS Congress, up to four nights hotel accommodation, a travel grant, as well as €1,000. The second prize will consist of €500 and a certificate.

**CME articles online**

All registered users of the EFNS website do have the possibility of answering questions related to articles selected from the European Journal of Neurology and receiving a CME related to articles selected from the European Journal of Neurology as well as the European Journal of Neurology. Extra course syllabi are available in the e-education area of the EFNS website as well as on CD-Rom.

**Partners and collaborators**

Our Partners and Collaborating Societies consist of:

- European organisations dedicated to any associated speciality related to clinical neurology
- European subgroups of clinical neurology
- European patient organisations and neurological organisations outside of Europe.

Collaboration with the EFNS promotes cooperation and co-ordination in mutual areas of interest and creates more representative (and therefore more powerful) influence on national health authorities and the European Union.

Our partners are:

- European Association of Young Neurologists and Trainees, European Brain Council,
- European Board of Neurology, European Federation of Neurological Associations,
- European Federation of Autonomic Societies,
- European Headache Federation, European Epilepsy Academy, European Neurological Society, Movement Disorders Society-
- European Section, World Federation of Neurology.

**Publications**

European Journal of Neurology (EJNe): 12 issues per year – FREE OF CHARGE online access for members of the EFNS.

The European Journal of Neurology covers all areas of clinical and basic research in neurology, including pre-clinical research of immediate translational value for new potential treatments. Emphasis is placed on major diseases or disorders with a large clinical and socio-economic importance (dementia, stroke, epilepsy, headache, multiple sclerosis, movement disorder, and infectious diseases).

The journal provides a forum for European activity in clinical neuroscience and medical practice and helps strengthen the links between research workers and clinicians in Europe and other parts of the world. The journal also publishes the official EFNS task-force papers and CME Articles which can be read to gain CME credits. ISI Journal Citation Reports® Ranking: 2009: 66/167 Clinical Neurology; 129/230 Neurosciences

New 2009 Impact Factor: 2.51

http://www.europeanjournalofneurology.com

EFNS Newsletter

Four issues per year; free of charge for everybody who is interested.

**European Handbook of Neurological Management**

The European Handbook of Neurological Management, is a unique book that brings together peer-reviewed guidelines for the treatment and management of neurological disease. For the first time, neurologists can find advice on management aspects of most neurological disorders that is either evidence-based or where the evidence is inadequate, the consensus guidance of an international European panel of experts. Each chapter of the handbook is written by task forces with a multinational European authorship in accordance with prespecified guidance for collecting evidence and reaching consensus. Whenever possible, these task forces have collaborated with the corresponding disease-specific European society. In some cases societies and authors from outside Europe have contributed.

EFNS Guideline papers are included in the European Journal of Neurology Handbook and are also available to all FREE OF CHARGE on the EFNS website. An important aim of the EFNS is to establish European standards of diagnosis, treatment and care within the various subfields of neurology. Teaching course syllabi are available in the e-education area of the EFNS website as well as on CD-Rom.

For further details and information on the EFNS, please visit the EFNS Website www.efns.org or contact

**EFNS Academy 2011**

SPECIAL FEATURE – EFNS 2011
The History of the European Federation of Neurological Societies

The birth of the EFNS
This will be the fifteenth EFNS Congress and marks 20 years since the foundation of the EFNS, a good time to take stock of our history and look forward to the future. The first glimmerings of the EFNS appeared in 1986 at the Danube-Neurology Congress where Professor Mieczyslaw Wender, Poland, proposed a unified European neurological society. In 1989 Professor Daniel Bartko, President of the Czechoslovakian Neurological Society, picked up the idea and organised a pan European congress for neurology attended by 1500 participants. In 1991 a second pan European congress for neurology was held in Vienna under the Presidency of Professor Franz Gerstenbrand. At that congress with the encouragement of Professor John, now Lord, Walton, the Federation of European Neurological Societies was founded with Professor Gerstenbrand as its first President and a Council of Delegates consisting of representatives from each founding national European society. Dr. Friederike Tschabitscher was appointed as executive director and ran the secretariat from the first EFNS office in Rosenhügel, Vienna.

Founding National Societies

Austria, Belgium, Bulgaria, Czechoslovakia (now: Czech Republic and Slovakia), Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Norway, Poland, Portugal, Romania, USSR (now: Russia), Yugoslavia (now: Bosnia & Herzegovina, Croatia, FYRO Macedonia, Kosovo, Montenegro, Slovenia, Serbia), Sweden, The Netherlands, Spain, United Kingdom.

There were further meetings in 1993 in Berlin organised by Professor Karl Einhäupl and in 1994 in Poznan, Poland organised by Professor Wesder but the first formal EFNS Congress was organised by Georges Seminoc in Marseille, France in 1995. Since 1998 there have been annual Congresses except in 2001 when the EFNS collaborated with the Association of British Neurologists to host the World Congress of Neurology in London.

As a consequence the EFNS now has 44 national societies as members representing altogether more than 19000 individual neurologists. To these must be added associate member societies from surrounding countries Algeria, Egypt, Jordan, Lebanon, Libya, Morocco, Tunisia and Syria whose delegates are also welcome at EFNS Congresses.

Growth of the EFNS
The Federation has grown steadily since 1991 with the addition of individual members almost every year so that we now include almost all countries within deliberately generously drawn geographical and political boundaries of “Europe”.

National societies which have joined the EFNS since its Foundation
1992: Albania, Croatia, Moldova, Slovenia
1994: Ukraine
1995: Belarus, Georgia, Israel, Latvia, Luxembourg, Switzerland, Turkey
1999: Cyprus
2003: Armenia, Lithuania
2004: Uzbekistan
2007: Bosnia and Herzegovina
2008: FYROMacedonia
2009: Montenegro

Scientist Panels and Guidelines
One of the tremendous advantages of a European Federation is the ability to bring together sub- (or super- according to your viewpoint) specialists together in sufficient numbers to reach critical mass, an ability not shared for all topics by national societies. From the founda-
tion of the federation, Scientist Panels have existed to foster research, practice and training in their own specialist fields. The most obvious output from these panels has been the European guidelines which aim to provide unbiased evidence based guidelines on important, and often controversial, neurological management problems. These are regularly updated and freely available on the EFNS website. The first collection of 40 guidelines was collected into a popular European Handbook of Neurological Management in 2006 which was republished as Volume 1 of a revised second edition in 2010. Volume 2 will be issued shortly.

Continuing Education
One of the major functions of the EFNS is education, most obviously delivered in the teaching courses but also in the scientific sessions at the Congresses. The EFNS has awarded 200 bursaries to enable young European neurologists to attend each congress. However, the Federation supports many other educational activities apart from the Congress. Three regional teaching courses are held in Eastern European countries every year to which local neurological trainees are invited. For the past three years the EFNS has also run an African regional teaching course in partnership with the Pan African Neurological Society. Since 2000 the EFNS has run a summer school or Academy for about 120 young neurologists at Staré Splavy in the Czech Republic. Since 2001 short interdepartmental visits for trainees to visit centres in other European countries are enabled by popular competitive grants. Since 2004 there have been opportunities for interdepartmental training and research fellowships lasting three to twelve months.

European Journal of Neurology
The EFNS founded its own journal in 1995 which contributes to its educational activities and disseminates European and international research. EFNS guidelines are published first in the European Journal of Neurology. Under the editorship of Professor François Boller and now Proessors Matti Hillbom and Anthony Schapira its impact factor rose steadily to 2.5 and is set to rise further.

Staff
Professor Jes Olesen, Denmark, succeeded Professor Gerstenbrand as President and served for a unique six years until 2001. He was in turn succeeded by Professor Wolf-Dieter Heiss, Germany, Jacques De Reuck, Belgium in 2005 and myself in 2009. The achievements of the EFNS would not have been possible without excellent staff. The founding Executive Director, Dr Friederike Tschabitscher, sadly died in 2003 and was succeeded by Lisa Müller who continues to oversee all our activities now. She is assisted in the Vienna office by Anja Sander, Julia Mayer and Julia Scheidl, in the Prague office by Magda Dohnalova and in the Florence office by Eveline Sipido. We are fortunate to have such devoted staff and owe them our thanks.

The future
No institution can afford to stand still and there are exciting developments in prospect. This year in collaboration with the British National Health Service, University College London and the European Neurological Society we will be launching e-Brain an on line neurological education programme with several hundred sessions. Planning for future Congresses is well advanced. The 16th EFNS Congress will be held in Stockholm, Sweden from 8-11 September 2012. The World Congress of Neurology will be held in Vienna, Austria, from 22-27 September 2013 as guests of the Austrian Neurological Society. Since the EFNS traditionally does not hold a Congress in the year in which the World Congress is in Europe, the Austrians have kindly invited us to host the meeting. The 17th EFNS Congress will be held in Istanbul, Turkey in 2014.

During the last 20 years, our sister institution the European Neurological Society has been developing in parallel and offering a series of equally exciting and educational annual congresses; negotiations between the two organisations are under way with the intention of organising a giant joint Congress in Germany in 2015 and further closer collaboration thereafter. This collaboration should help make European neurological congresses and European neurology the best in the world.
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The widening spectrum of antibody-mediated neurological diseases: from neuromuscular junction to brain

Abstract

There are an increasing number of relatively rare conditions that are associated with serum autoantibodies to receptors, ion channels or associated proteins in the nervous system. Particularly exciting has been the recent recognition of autoimmune central nervous system (CNS) diseases, associated with specific antibodies to neuronal targets, which improve substantially with immunotherapies. In addition, there are antibodies to giall or myelin targets in demyelinating conditions. Although rare, the identification and treatment of these conditions can be very rewarding.

Introduction

The pathogenic roles of antibodies to acetylcholine receptors, muscle specific kinase and voltage-gated calcium channels in the peripheral myasthenic disorders are well established. These diseases are usually chronic and can be associated with tumours (thymomas or small cell lung cancer) but most patients do well neurologically with a combination of symptomatic and immunosuppressive therapies. In addition, antibodies to voltage-gated potassium channel complexes (VGKC-complex) are found at low levels in some patients with acquired neuromyotonia which is associated with thymoma in about 20%.

By contrast, antibodies to CNS antigens such as Hu,Yo, Ma2 are established markers for the presence of a tumour but the antigens are intracellular proteins and the antibodies are not thought to be pathogenic (with one or two exceptions, eg); these paraneoplastic conditions seldom respond well to immunotherapies. In the last ten years, however, the roles of antibodies in CNS conditions has expanded considerably with identification of antibodies binding to extracellular domains of neuronal proteins and, which are highly likely to alter neuronal function, as has been shown in a few instances; the presence of the antibodies is taken to define an immunotherapy-responsive disorder. Here, I will briefly describe the antiepileptic targets, the antibodies and the associated syndromes. Many detailed reviews can be found elsewhere.

New targets for autoantibodies

Until recently, it was thought that VGKC antibodies were directed against the voltage-gated potassium channels themselves. However, it now clear that the majority of the VGKC antibodies are directed towards proteins that are tightly complexed with VGKCs in the nervous system. These VGKC-complex proteins include leucine-rich glioma-inactivated 1 (LG1), contactin-2 and the contactin-associated proteins like 2 (CASPR2), and Contactin-2. These proteins are all expressed in the CNS but CASPR2 and Contactin-2 are also important components of the juxtaparanodes of peripheral motor and sensory axons. NMDA, AMPA, GABA(B) and glycine receptors are all components of brain synapses although they are also expressed to variable extents extrasynaptically. The only intracellular antigen that is relevant here is glutamic acid decarboxylase (GAD), an intracellular enzyme expressed in GABAergic neurons. In addition to these neuronal targets, the water channel aquaporin-4 (AQP4) is an important astrocytic protein, and myelin-oligodendrocyte glycoprotein (MOG) is a membrane component of myelin. With the exception of GAD, these antibodies are most appropriately identified by binding to cells that have been engineered to express the target antigen on their cell surface (cell based assays), although immunoprecipitation for VGKC-complex antibodies is a useful first screen.

Encephalopathies

Morvan’s syndrome is a very rare condition that involves all parts of the nervous system. It presents typically with a combination of peripheral nerve hypereexcitability causing neuromyotonia, autonomic disturbance such as constipation, cardiac arrhythmias and sweating, and CNS disturbance, particularly insomnia and confusion. MRI and cerebrospinal fluid (CSF) abnormalities are uncommon, but serum VGKC-complex antibodies are present in the majority of patients, and a high proportion have thymomas. Some also have myasthenia gravis or other autoimmune diseases (Irani et al in preparation).

Limbic encephalitis is increasingly recognised as a cause of non-paraneoplastic memory loss and seizures with 100s of cases reported in the last ten years. Some patients have partial syndromes presenting with predominant psychosis, epilepsy or memory loss. High signal in the medial temporal lobes on MRI and hypoxaemia at onset are common, but not invariable; and the CSF may be inflammatory or normal. Oligoclonal bands are also variable. The exclusion of other causes (infectious, toxic, metabolic, tumours etc) and the presence of antibodies to VGKC-complex proteins particularly LGI1, AMPA, or GABAB will help to secure the diagnosis, direct the search for an appropriate tumour in a minority, and prompt immunotherapies which can be very successful. Another form of limbic encephalitis is associated with antibodies to GAD. Although these antibodies are unlikely to be pathogenic, as GAD is intracellular, the antibodies appear to be markers of an immune-mediated syndrome.

A seizure-semiology has been recognised in patients with VGKC-complex antibodies directed against LGI1. These often occur preceding the full features of limbic encephalitis, and consist of brief dystonic movements usually of one arm and the ipsilateral face. There is seldom loss of consciousness but they can be very frequent (up to 70 per day). Early recognition and immunotherapy may be able to prevent development of limbic encephalitis.

NMDAR antibody encephalitis has only recently been recognised but 100s of patients have now been identified. They present with neuropsychiatric features, seizures and amnesia but develop, over days to weeks, choreathetoid movement disorders, facial dyskinesias, mutism, reduced consciousness, brainstem, autonomic and hypothalamic involvement. Once seen these are very characteristic features but some patients present with attenuated forms and are more difficult to recognise. MRI is seldom helpful but the CSF is usually cellular and oligoclonal bands are found, although not necessarily at presentation. Typically ovarian teratomas are found in up to 50% of women between puberty and middle age, but tumours are uncommon at other ages or in males. This condition is increasingly identified in small children, some less than one year in age, who present with bizarre behaviours and movements, screaming and seizures. Although most patients make a substantial recovery following appropriate treatment and immunotherapies, the course is often protracted with weeks in intensive care; prompt diagnosis and aggressive treatments are likely to be important in reducing hospitalisation and long-term disability.

Stiff person syndrome (SPS) and its association with GAD antibodies is well known. Progressive encephalomyelitis with rigidity and myoclonus (PERM) is a related syndrome which is even rarer but more often fatal. Recently, antibodies to glycine receptors have been identified in a few patients with PERM, SPS or related syndromes. Although uncommon, when recognised this condition can respond to immunotherapies which may prevent a fatal outcome (Lete et al in preparation).

Demyelinating conditions

Neuromyelitis optica is a well described condition associated with relapses of optic neuritis and extensive spinal cord inflammation; at onset the diagnosis can be confused with multiple sclerosis, particularly in children who may have florid brain lesions. The association with antibodies to AQP4 has dramatically increased the recognition of this syndrome, and the use of immunotherapies such as plasma exchange and intravenous immunoglobulins, rather than interferon beta and other immune modifiers which may make it worse, should improve the prognosis. There is now good evidence for the pathogenicity of AQP4 antibodies although the role of cellular immunity is not yet explored.
Acute disseminated encephalomyelitis (ADEM) can present in a similar manner, or with florid brain lesions involving both white and grey matter. It is found more frequently in children than adults and is by definition a monophasic disease. The discovery of antibodies that bind native MOG\(^{15}\) is beginning to help define this condition at onset, and may also be useful in distinguishing ADEM from early cases of NMO.

**Concluding remarks**

These conditions are very satisfying to diagnose and to treat. Searching for antibodies in children and adults with more common forms of encephalitis, psychosis, epilepsy, and dementia, and identification of new antigenic targets in patients with similar presentations are important future goals for everyone in this exciting field. There are many unanswered questions regarding the causes of the non-paraneoplastic conditions, the cellular targets and mechanisms of the antibodies and how they alter neuronal or glial function; more experimental studies need to be done.

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**References**


