A *MOVEMENT* DISORDER SOCIETY UPDATE

Moving Along

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Health Care in the US: The Cost of Drugs – New Changes in Medicare

— Mark S. Yerby, MD, MPH, FAAN, Legislative Affairs Committee, Portland, OR, USA

Medicare is the health plan of over 41 million Americans, 35 million seniors and six million disabled persons. It initially provided coverage for hospital and physician services but not for medications. As prescription drugs have become a greater proportion of overall health care expenditures, this lack of coverage for medications has become problematic. Some consumers were actually going to Canada or Mexico for their medications. This grouped with the increasing perception that the pharmaceutical industry is gouging the public, and the growing disparity between the cost of drugs in the United States and foreign countries, led to pressures to address this politically. In response, Congress initiated the Medicare Modernization Act of 2003. This provides for subsidized prescription drug benefits for all Medicare beneficiaries to be administered through private stand alone prescription drug plans (PDPs) or plans through Health Maintenance Organizations (HMOs) or Preferred Provider Organizations (PPOs).

In his State of the Union Address in 2003, President George Bush proposed the establishment of a Medicare Prescription Drug Benefit, the largest expansion of Medicare coverage in history. This benefit was estimated to cost $400 billion over 10 years. Though a significant cost, it appeared politically feasible. Unfortunately for the administration, the Medicare Actuary calculated that the cost was actually $551.5 billion.

This brought strong objections from Republican leaders. On the other side of the aisle, the changes in Medicare appeared to result in a privatization of what had been a public plan. The prohibition against medicine re-importation and negotiations with industry for discounts, gave the impression that the plan was a windfall for the pharmaceutical industry.

Mark S. Yerby, MD, MPH, FAAN

The program will develop in stages. The initial component is a Drug Discount Card aimed at the poor. In the spring of 2005, notices were sent to low income Medicare beneficiaries encouraging them to enroll and obtain a card. Enrollment started in May 2004 and ceased on Dec. 31, 2005. The cards are provided by private companies that are contracted to provide a panel of medications at a discount of 10 to 25%. The amount of discount a beneficiary receives is a function of their income and the region in which they reside. The very poor (less than $12,569 for a single person or $16,862 for a couple) qualify for a $600 credit on their prescription drug card.

In 2006, prescription drug benefits will be available to all Medicare beneficiaries who enroll. Enrollment began on Nov. 15, 2005. Those "dual eligibles" who have both Medicare and Medicaid found on Jan. 1, 2006, that almost all of their medications are covered by Medicare. Some people will have to make a co-payment of $1 to $5 per prescription depending on their income and those living in nursing homes will pay nothing.

The beneficiary must pay a premium of $35 a month. People with incomes below 150% of the federal poverty line are eligible for subsidies toward the premium. There is an annual $250 deductible. Once this is met, Medicare will pay 75% of the costs of prescriptions between $250 and $2,250. The beneficiary must pay 100% of the costs of drugs between $2,250 and $3,600. For costs above $3,600 annually, Medicare will pay 95%.

An enormous advertising blitz was launched Oct. 1 in an attempt to maximize enrollment. The plan's complexity with some early coverage, none in the "middle", and more coverage

CONTINUED ON PAGE 4

inside this issue

Looking back on a busy 2005 year in our profession, it is clear that progress and challenges in Movement Disorders go hand in hand. Many exciting new findings, both in basic and in clinical research, have been presented at the latest conference of The *Movement* Disorder Society and at the many MDS-endorsed and sponsored scientific and educational events during this past year.

On the other hand, scientific progress itself seems to have created, or at least exacerbated, the formidable challenge to make its benefits available to all patients in a fair manner. Part of this challenge is the increasing cost of new drugs. Therefore, the cover story of this Fall/Winter issue of *Moving Along*, reviews recent changes in Medicare programs trying to deal with this problem. It is clear that satisfactory solutions can only be found in the wider context of responsible social and public policies. As members of the medical and research community, we have to remember that those responsible policies can never be taken for granted. The contribution of all of us is needed to ensure that the astounding scientific and medical progress that we have the chance to be part of, will actually translate into better treatment for all patients.

Some of those interesting new scientific developments, particularly those that are still controversial, such as the use of transcranial sonography in the differential diagnosis of Parkinson's disease, will be featured in this and upcoming issues.


Irene Litvan, MD


Thomas Gasser, MD

As we are all acutely aware, most research in Movement Disorders does not give definitive answers, but rather, raises more questions that need to be addressed. Therefore, the Editors of this newsletter feel that the format of a "controversy" is particularly suitable to spark interest in the membership of MDS in ongoing research. We encourage and invite all of our readers who would like to discuss a particularly "controversial" topic, to send in their suggestions. A pointed presentation of arguments is encouraged! We will find a worthy counterpart to take the other side and make the controversy complete. We hope for a continuing lively debate. In addition to its scientific and policy focus, this issue again brings you reports on past meetings, as well as notifications of Congresses and meetings to come, job opportunities and other news from the Movement Disorders community.

The Editors wish to all the readers of the newsletter a happy, healthy and successful New Year!

LETTERS TO THE EDITORS

Your Comments and Questions Are Always Welcome

Editorial Policy

As part of its democratic commitment, MDS welcomes the input of all its members about the features and articles that appear in this newsletter. Have a comment or question? Each issue will include your responses in the "Letters to the Editor" section. All materials submitted become the property of MDS.

Address your communications to:

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The relatively young subspecialty of Movement Disorders continues to evolve and grow rapidly and advances in brain imaging and genetic testing are starting to have an impact on diagnostics and nosology in much the same way audio visual aids and neurophysiological techniques did twenty years ago. The increasing awareness of the frequent occurrence of cognitive deterioration in Parkinson's disease and the proven efficacy of dopamine agonists in Ekbom's syndrome are just two examples of the many changes impacting on clinical practice. Increased knowledge accrued from molecular neuroscience will also hopefully set the stage for translational research leading to the discovery of disease modifying therapies. The MDS leadership is sensitive to these developments and the need to react to their impact on our specialty.

The 2006-2009 strategic planning process began with a series of leadership meetings between August 23-27, in Dublin, Ireland. Over the course of a week, the European Section's Working Group on Education in Europe, the MDS Education Committee, the Industrial Relations Committee, the MDS Officers and the international Strategy and Planning Committee met to discuss issues felt to be important for the future of the Society and the discipline of Movement Disorders.

Building on the success of the two previous Strategy and Planning meetings held in Aguablava, Catalonia and Salzburg, Austria, the leadership discussed future objectives and unmet needs in a lively and informal manner.

To prepare for this process, several surveys had been administered to the MDS membership and other constituent groups within the Society. By measuring member feedback and developing trend information for the subspecialty, the outcome of these surveys provided important background needs data for discussion.

Several themes emerged out of the constructive meetings and are summarized below.

Congress, Education and Industrial Relations

In order to ensure the growing vitality of the Society's educational arm, MDS will seek to expand the teaching role of the International Congress of Parkinson's Disease and Movement Disorders and the Education Program in general. Specifically, MDS will seek to offer teaching courses during the International Congress, expand its capacity to generate enduring educational materials, and further establish MDS's premier role in the fields of Ekbom's restless leg syndrome, Parkinson's disease dementia and other Movement Disorders. The Society will also continue to build upon existing and explore new collaborative opportunities with respect to education.

Membership

Recognition of the increasing global diversity of the MDS membership is critical to the future of

CONTINUED ON PAGE 4

Participants of the 2005 MDS International Strategy and Planning Meeting, Dublin, Ireland. From left to right: Murat Emre, Anthony Lang, Niall Quinn, Philip Thompson, Cynthia Comella, Eduardo Tolosa, Yoshikuni Mizuno, Andrew Lees, Werner Poewe, Joseph Jankovic, Olivier Rascol, Regina Katzenschlager, Christopher Goetz, Francisco Cardoso, Wolfgang Oertel, Caley Kleczka, Daniel Tarsy, Günther Deuschl, Kay Whalen

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The Cost of Drugs – New Changes in Medicare

Continued from cover...

with increasing costs has many seniors confused. Because plans will each have their own formularies, a beneficiary may find that if they are prescribed a "new" medication to replace a previously used one, the drug may not be covered. The uncertainty of whether the drug one needs will be covered is another obstacle to the plan's acceptance. This, plus costs of an additional premium, may discourage enrollment. In an attempt to minimize this, penalties for enrolling after May 15, 2006 have been established. But the fear of penalties themselves may make beneficiaries leery of the entire process.

Complicating things further, Medicare as a whole is targeted for significant budget cuts. The Senate Finance Committee has proposed $10 billion in Medicare cuts over five years. Though there is significant pressure to reduce the depth of these reductions in funding, it is clearly only a matter of how deep it is, not whether there will be budget cuts to this program. Medicare will spend $332.3 billion on benefits this year. The new coverage for prescription drugs is estimated to add an additional $60 billion.

For those with significant prescription drug costs, the plans will save them money. For those with minimal costs, the plans probably will not. With no checks on the pharmaceutical company's price structure or ability of plans to negotiate discounts, there is no incentive for the industry to control pricing. The law's prohibition against drug re-importation further insulates "Big Pharma". All in all, one would expect this plan to reduce costs of purchasing prescription drugs for those Medicare beneficiaries who require a good deal of medication. For the rest of us, the costs of prescription drugs are actually likely to increase.

President's Letter

Continued from page 3...

Movement Disorders. As the 2006-2009 Strategic Plan is developed, you may expect to see an expanded focus on this area as we look to increase current initiatives and explore new opportunities for members, particularly as these relate to expansion of existing and creation of new member benefits, and extending the Society's reach in underserved regions.

Journal

Movement Disorders continues to be the premier journal for our subspecialty with an Impact Factor of 3.093. In planning for the future development of the journal, MDS will continue to identify ways to enhance the journal's functionality, particularly as this relates to its increasing presence on the Internet and its potential role as an important component of the Society's educational program.

Organization/Finances

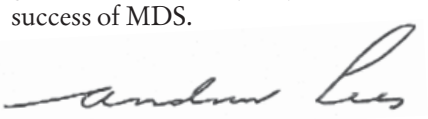
As the International Executive Committee (IEC) looks ahead to the next several years, critical areas of focus will include developing future generations of leadership, increasing IEC involvement in the governance of the Society, and expanding the MDS's reach to existing and future regional sections as well as establishing relationships with other international Movement Disorders groups.

Outreach

Increased awareness of MDS, the subspecialty, and the education of healthcare professionals and the public on Movement Disorders remains a major priority. Over the next several years, MDS will enhance its global outreach through expanded focus on public relations, building upon current initiatives as well as identifying new programs.

The new strategic plan for 2006-2009 will be finalized over the next several months as the International Executive Committee assisted by the Strategy and Planning Committee identify and prioritize the action steps necessary to achieving these important goals. The finalized 2006-2009 Strategic Plan will be distributed to MDS members in early 2006.

As we continue to grow, you can expect to see many exciting new developments. To give two examples, we have set up a major initiative to develop and expand our Web site for educational use and the formation of an Asian and Oceanian Section will undoubtedly lead to new and exciting educational opportunities for MDS in the Pacific Rim. MDS's accomplishments and its success in implementing past strategic initiatives is due in the main to the enthusiasm and support of our growing membership and I would like to express my appreciation and gratitude to the many of you who have contributed to the success of MDS.



Andrew Lees, MD, FRCP
MDS President 2005-2006

Planning Well Underway for 10th International Congress

The 10th International Congress of Parkinson's Disease and Movement Disorders is less than one year away. The International Secretariat is working vigorously to prepare for what will mark the second year of the annual International Congress format. In the past, the International Congresses were held on a biennial schedule. The 9th International Congress in New Orleans was the first International Congress to be held on an annual basis.

The 2006 International Congress will be held in Kyoto, Japan from October 29- November 2, 2006. Rich with history, Kyoto is one of Japan's leading large cities and it will make a spectacular location for the International Congress. The city offers a unique blend of old and new and is home to a myriad of stunning temples and shrines. The convention center, Kyoto International Conference Hall, is set at the foot of the evergreen Mt. Hiei, complete with a Japanese Garden providing endless natural beauty.

Travel to Kyoto is quite easy. Attendees can fly in to Kansai International Airport (KIX) in Osaka, Japan. To reach the convention center, it is approximately a 75-minute ride via Japan Rail's (JR) Haruka Limited Express from KIX, and then a 20-minute subway ride from JR Kyoto station in Kyoto. Attendees may also choose to fly in to Tokyo's Narita International or Osaka's Itami Airports.

New for this International Congress will be Meet the Expert sessions and Teaching Courses. Meet the Expert sessions will cover the management and treatment of Movement Disorders. These informal sessions will provide attendees the opportunity to interact with the session chair, creating a more personal setting. Attendees will also be encouraged to bring case studies to spur engaging discussions in smaller groups. Teaching Courses will cover basic clinical features of disease states, neuroimaging and disease management. These courses are being added in response to member and young member feedback.

MDS would like to invite all members and non-members to submit their abstract for review and consideration. Abstracts, based on original research, are now being accepted through

June 8, 2006 for online submissions, and June 1, 2006 for paper submissions. Authors can submit their abstract using the online submission database located on our Web site at www.movementdisorders.org.

Additional International Congress information will be available in February 2006 when the Preliminary Program is distributed. Hotel reservations, International Congress registration and fees, and the most current Scientific Program listing will be included in this program.

If you have any questions about the 10th International Congress of Parkinson's Disease and Movement Disorders in Kyoto, Japan, or if you are a non-member wishing to receive information, please contact the MDS International Secretariat by e-mail at congress@movementdisorders.org or visit the MDS Web site at www.movementdisorders.org.

RENEW FOR 2006!

The *Movement* Disorder Society's (MDS) 2006 Dues Renewal process is underway. With your 2006 membership renewal, you will be able to continue taking advantage of the many benefits MDS has to offer, including reduced fees to our 10th International Congress of Parkinson's Disease and Movement Disorders, October 29-November 2, 2006 in Kyoto, Japan. If you have not yet renewed for 2006, you may do so by visiting our Web site, www.movementdisorders.org, or by contacting the MDS Secretariat at +1 414-276-2145.

The *Movement* Disorder Society (MDS) is proud to announce the establishment of the Asian and Oceanian Section (MDS-AOS).

Beginning in 2004, a Steering Committee was formed to consider and develop a proposal for the establishment of this new regional section. On March 4, 2005, the proposal was presented to and enthusiastically approved by the MDS International Executive Committee (IEC).

On behalf of the MDS International and MDS-AOS leaderships, we would like to thank the following members of the MDS-AOS Steering Committee for their vision, commitment and tireless efforts leading to the establishment of the Asian and Oceanian Section: Prof. Robert Iansek (Chairman), Dr. A Agoese, Prof. Tim Anderson, Prof. Madhuri Behari, Dr. Mohit Bhatt, Prof. Prasert Boongird, Prof. Piu Chan, Prof. Shengdi Chen, Dr. Nee Kong Chew, Prof. Mayvelyn Gose, Prof. Shu-Leong Ho, Prof. Jin-Soo Kim, Prof. Duch Hinih Le, Prof. Chuan-Zhen Lu, Prof. Yoshikuni Mizuno, Dr. Apichart Pisarnpong, Prof. Bhim Singhal, Dr. Barry Snow, Dr. Jithanorm Suwantamee, Dr. Thamrin Syamsudin, Dr. Adrian Tan, Dr. Eng-King Tan, Dr. Louis Tan, Prof. Philip Thompson, Prof. Xin De Wang, Prof. Reuy-Meei Wu, and Prof. Zhen Xin Zhang.

Created not only to further the goals and objectives of MDS International, MDS-AOS will also strive to increase the interest, education and participation of neurologists, non-Movement Disorder specialists, trainees, allied health professionals and scientists in the Asian and Oceanic region. The membership of MDS-AOS is comprised of all MDS members living and working in Asia and Oceania.

The mission of MDS-AOS is to represent and promote The *Movement* Disorder Society and its mission in Asia and Oceania. MDS-AOS aims to facilitate communication between clinicians and researchers in the region; disseminate updated knowledge about Movement Disorders; improve quality of life and independence of Movement Disorders patients and caregivers; and promote research in Movement Disorders within the region.

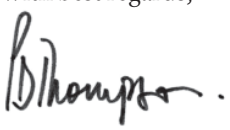
To achieve these aims, future plans of the section include proposals to organize and offer biennially a regional meeting as well as other regional educational programs targeted toward Movement Disorder specialists, general neurologists, researchers, academicians, allied health professionals, medical trainees and others living and working in Asia and Oceania with an interest in the field of Movement Disorders.

The upcoming 10th International Congress of Parkinson's Disease and Movement Disorders in Kyoto, Japan, 29 October to 2 November 2006, will provide us with a special opportunity to increase awareness of MDS in our region. This is the first time the meeting will be held in the Asian and Oceanian region and we are counting on your support to ensure its success. In addition, MDS-AOS will be officially inaugurated during this meeting and we hope that you and your colleagues will be present to celebrate this auspicious occasion.

Looking to the future, MDS-AOS will hold its first election in 2006 and every two years thereafter for the election of Officers-Elect and members of the Executive Committee. This election is administered in parallel with the MDS international election process. A Nomination Committee will be formed to recommend individuals to the MDS-AOS leadership to stand election for the 2007-2008 term. Your participation will be key in identifying future leaders to carry forward the goals and objectives of the section in the years to come.

MDS-AOS is honored to represent The *Movement* Disorder Society in the Asian and Oceanian region as am I to serve as the region's first Chairman. On behalf of the members of the MDS-AOS Steering Committee and the newly appointed section leadership, I look forward to bringing you future updates of the section and its plans for future initiatives.

With best regards,



Philip Thompson
Chairman

The MDS-AOS Steering Committee, in consultation with the MDS international leadership, established a governance and administrative infrastructure. The first step in this process was to appoint an inaugural section leadership. In May 2005, the Steering Committee presented its recommendations for the 2005-2006 MDS-AOS Officers and Executive Committee to the MDS leadership. The following executive roster was ratified by the MDS IEC on June 3, 2005:

Asian and Oceanian Section

2005-2006 Officers and Executive Committee

Officers

Chairman: Philip Thompson
Chairman-elect: Robert Iansek
Secretary: Yoshikuni Mizuno
Secretary-elect: Louis Tan
Treasurer: Shu-Leong Ho
Treasurer-elect: Mohit Bhatt

Executive Committee

Tim Anderson
Madhuri Behari
Shengdi Chen
Lillian Lee
Santhi Puvanarajah
Bhim Singhal
Young Ho Sohn
Jithanorm Suwantamee
Eng-King Tan
Reuy-Meei Wu
Mitsutoshi Yamamoto

Dear Colleagues,

MDS-ES continues to work actively for MDS members in Europe and we have a lot to report!

I am delighted to announce that Mira Kapisyzi from Albania has accepted the invitation of the European Section Executive Committee to join us as an *ex-officio* member. Dr. Kapisyzi will be able to advise us on the particular educational and practical needs of under-served areas in Europe and we hope this will lead to an increase in our membership in these countries.

Over recent months, MDS-ES/EFNS writing groups working on the Neurology Guidelines project of the European Federation of Neurological Societies have been developing European Guidelines on Parkinson's disease and dystonia. MDS has provided financial support for these documents, which we hope will provide an important evidence-based reference source on Movement Disorders for neurologists throughout Europe. The *Movement* Disorder Society's formal position is not to issue guidelines, so the documents will be officially recognized as 'A Systematic Review on the Management of Parkinson's Disease/Dystonia: A Report by an EFNS/MDS-ES Task Force'. The documents will be reviewed by the MDS Scientific Issues Committee before publication.

Movement Disorders education in Europe was identified by the MDS-ES Strategic Planning meeting in Paris last year as a major priority. Accordingly, a Working Group on Education in Europe was convened and has worked to review the existing educational activities being offered by MDS, EFNS, and by other groups. The Working Group met in Dublin in August to review regional educational needs and to establish the role of the European Section in helping the MDS Education Committee to create programs to meet the specific needs both of our members in Europe and the wider neurological community. We hope this will result in an attractive, well-balanced program of educational activities in the period between MDS Congresses.

The series of workshops on Dopamine Transporter Imaging in Neurological Practice started with a very successful program in Milan in April organized by Angelo Antonini at the Parkinson's Disease Institute. During the morning session, the international and local faculty provided an overview of the benefits and limitations of dopamine transporter imaging. Delegates transferred to the nuclear medicine department for the afternoon session to learn how images are captured for interpretation. The afternoon finished with the presentation of a selection of scans, which delegates were invited to score. The next workshop in this series is scheduled for Paris in January 2006 under the direction of Philippe Remy. Workshops will be organized through 2006 in the UK, Spain and Scandinavia.

Our Section's Annual General Meeting was held on Sept. 19 in Athens. This was the last time the meeting will take place during EFNS, as MDS now has a Congress each year where we can plan our annual business activities.

With best regards,

Niall Quinn
Chairman

Now Accepting Applications for the MDS Visiting Professor Program

The *Movement* Disorder Society (MDS) is currently accepting applications for countries interested in hosting a Visiting Professor in the MDS-sponsored Visiting Professor Program. The MDS Visiting Professor Program provides educational opportunities in Movement Disorders to regions of the world that are under-represented in the MDS and do not have regular access to educational programs in Movement Disorders. Applications for 2006 should be submitted to MDS by April 30, 2006. For more information or applications for this program, please click on the following link, http://www.movementdisorders.org/education/visitingprofessor.shtml or contact Jenny Oliva, MDS Director of Education at +1 414-276-2145.

Should Transcranial Sonography be used for the Diagnosis of Parkinson's Disease? YES

— Daniela Berg, MD, University of Tübingen, Hertie Institute of Clinical Brain Research, Department of Neurodegenerative diseases, Tübingen, Germany

Up to now, Parkinson's disease (PD) is basically a clinical diagnosis. Although structural neuroimaging methods like special MRI techniques allow the identification of specific disease related alterations[1,2,3] and functional neuroimaging like PET and SPECT are very helpful for diagnosis,[4,5] these methods are too costly to be routinely applied. Using a 1.6- to 2.5-MHz phased-array transducer, transcranial sonography (TCS) enables the depiction of the brain parenchyma through the temporal bone window.

> *"... substantia nigra (SN) hyperechogenicity is a characteristic ultrasound finding in 91-100% of PD patients."*

In 1995, Becker and co-workers reported a highly characteristic enlargement of the echogenic signal ('hyperechogenicity') of the substantia nigra (SN) in idiopathic PD[6] (Figure). Since then, a number of studies have been performed indicating that this method is a valuable tool for diagnosis and differential diagnosis of PD, which even allows the identification of individuals at risk for nigrostriatal dysfunction. Evidence that this method is indeed valid can be derived from the following findings:

1. Several groups independently demonstrated that SN hyperechogenicity is a characteristic ultrasound finding in 91-100% of PD patients.[7,8,10]
2. Reproducibility of findings is high: SN hyperechogenicity is either semiquantitavely assessed or quantified by planimetric meaurement of the area of increased echogenicity (Figure). Interrater correlation has been shown to be high (r=0.8).[7,11]
3. Prospective studies with two independent sonographers/raters, of whom at least one was completely blinded to the relevant clinical data of patients, indicate a high predictive value of an association of SN echogenicity and nigrostriatal impairment.[11-14]
4. SN hyperechogenicity indeed reflects an alteration linked to nigrostriatal impairment as:
   (i) Median SN echogenic size is larger contralateral to the clinically more affected side.[7]
   (ii) SN echogenicity is enhanced in PD but not in essential tremor[15] and only very rarely in atypical Parkinsonian syndromes like striatonigral degeneration (SND) or progressive supranuclear palsy (PSP).[14,16]
   (iii) In 8-10% of healthy subjects, increased echogenicity of the SN can be detected.[11,13] This percentage is much higher than the expected number of individuals that will develop PD but is in the same range of neuropathologically suspected presymptomatic PD.[17] Interestingly, also in these healthy subjects, increased SN echogenicity is associated with a mild functional impairment of the nigrostriatal system, demonstrated by the following observations: Elderly patients without prediagnosed extrapyramidal disorder but with SN hyperechogenicity develop more frequent and more severe signs of motor impairment and in some cases even typical PD than those with a normal SN echogenicity.[12] Moreover, patients with SN hyperechogenicity, but without prediagnosed PD, develop more often and more severe extrapyramidal symptoms following neuroleptic therapy for psychiatric disorders.[18] Furthermore, PET studies of clinically healthy subjects with marked SN hyperechogenicity revealed decreased striatal[18]F-dopa uptake in 60% of cases, indicating a subclinical impairment of the nigrostriatal system.[11,13] Also in asymptomatic *parkin* mutation carriers, SN hyperechogenicity is found to be associated with reduced PET values.[19] In subjects with idiopathic olfactory dysfunction but without PD who exhibited SN hyperechogenicity,[1,2,3] I-FP-CIT SPECT investigation revealed alteration of the nigrostriatal dopaminergic system in 70% of cases.[20]
5. SN hyperechogenicity reflects PD specific biochemical alterations like increased iron[11,13] and to a lesser extent increased ferritin and decreased neuromelanin content.[21] Genetic studies revealed that SN hyperechogenicity may be associated with variations in genes involved in brain iron metabolism.[22,23]

Still, future studies are needed to prove the validity of TCS. If the value of TCS for diagnosis as well as differential diagnosis of PD is corroborated, TCS could be used as a broadly available, easiliy applicable, side-effect free and cheap technique to improve diagnostic accuracy of PD. High validity of this ultrasound feature would also indicate that increased echogenicity of the substantia nigra in healthy controls may indicate a marker of vulnerability with high sensitivity.

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CONTINUED ON PAGE 10

Should Transcranial Sonography be used for the Diagnosis of Parkinson's Disease? NO

— Radu Constantinescu, MD, University of Rochester School of Medicine and Dentistry, Department of Neurology, Rochester, NY, USA
— Bernard Ravina, MD, University of Rochester School of Medicine and Dentistry, Department of Neurology, Rochester, NY, USA

Transcranial sonography (TCS) is a potential diagnostic tool for use in Parkinson's disease (PD). It is attractive because it is a non-invasive, low risk test. This review, however, is intended to identify the shortcomings in data supporting the application of TCS in PD. The analysis is based on 21 original publications on TCS in parkinsonism,[4-24] partially summarized in Table 1.

There are clear steps needed to establish a diagnostic instrument for PD. First, the test must be studied in a well defined, but broad parkinsonian population, reflecting its future clinical application. Second, the diagnostic instrument has to be tested against a reference standard by truly blinded investigators to establish the performance characteristics (sensitivity and specificity). The reliability of the test must be assessed to determine if the test can be broadly applied.[1,2]

> *"The discrimination of TCS between different diagnostic categories is a good first step, but does not address the real clinical questions."*

Study Population

The diagnosis of PD is most challenging early in the course of disease.[3] It is here that new diagnostic tools would have an impact on clinical care and research. However, studies using TCS have largely focused on well defined groups of patients with clinically established diagnosis of PD or atypical parkinsonian syndromes (APS), without diagnostic ambiguity (table 1). The discrimination of TCS between these different diagnostic categories is a good first step, but does not address the real clinical questions.

A cross sectional study in people with parkin gene mutations suggests that TCS may identify susceptibility for PD,[14] but longitudinal follow-up is needed.

Reference Standards, Performance, and Reliability

As is usually the case, clinical criteria were used in all but five TCS studies and there is no neuropathological confirmation of TCS results. Thus, it is not clear if TCS is more precise than clinical examination. In five studies,[5,8,10,14,22] abnormal TCS findings were associated with reduced 18F-dopa PET uptake, but this is diagnostic of nigrostriatal dysfunction rather than PD.[25] Two studies followed PD patients longitudinally, but not from onset.[17,22] Follow-up of clinically uncertain cases would support the use of TCS as a diagnostic tool for PD.

A broad range of performance parameters have been reported for TCS even for established cases of parkinsonism: sensitivity 40-100% and specificity of 55-100% (table 1). These parameters correspond to a range of positive and negative predictive values and it is not clear how TCS would perform in a broader setting, with varying underlying rates of PD, outside of expert use in clinical research. There is little documentation of the inter-rater reliability of TCS in PD outside a small group of investigators[22] and inter-rater variability may account for the wide spectrum of results. Additionally, it has been reported that 9% of the general population has substantia nigra hyperechogenicity,[5] underscoring the potential for false positive tests.

Conclusions

TCS is a potentially useful tool for the diagnosis of PD, but more research needs to be performed to better determine if it is useful in the setting of diagnostic ambiguity early in parkinsonian disorders. Similarly, it remains unclear how well TCS performs in distinguishing PD and APS and if it can be reliably used by multiple raters.

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Should Transcranial Sonography be used for the Diagnosis of Parkinson's Disease? YES

continued from page 8...

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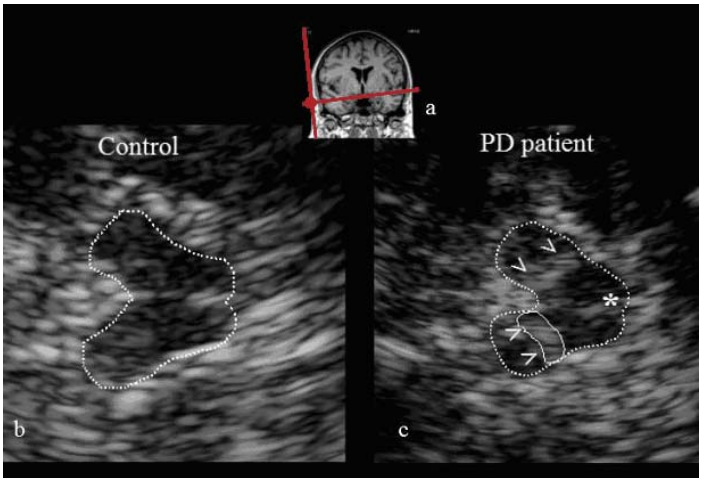

Figure

a. Application of the ultrasound probe at the temporal bone window visualizing the mesencephalic scanning plane (red line)

b. Butterfly-shaped hypoechognic brainstem of a control person in the mesencephalic scanning plane

c. Hyperechogenicity at the anatomical site of the substantia nigra (arrows). The area of hyperechogenicity can be measured planimetrically (line), star – aquaeduct.

Welcome Waived Dues Members!

Waived Dues is a reduced dues program specifically designed to enable those on a lower income to join the Society. If you know of someone who may be interested in applying for Waived Dues Membership, or if you would like to renew your Waived Dues Membership, please visit the MDS Web site at: www.movementdisorders.org and apply or renew today!

Should Transcranial Sonography be used for the Diagnosis of Parkinson's Disease? NO

continued from page 9...

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Table 1: Transcranial Sonography Studies in Parkinsonism

Reference	PD Patients	Healthy Controls	APS Patients	UPDRS III (SD)	Se%	Sp%	PPV	NPV
Studies comparing PD to controls								
Becker et al., 1995	30	30	NA	27.7 (13.1)[1]	40	100	"	"
Walter et al., 2002	30	30	NA	35.7 (19.7)	100	88	"	"
Ruprecht et al., 2002	14	582	NA	"	92	55.10	0.33	0.97
Walter et al., 2004	7	73	NA	39.1 (20.5)	100	28.50	0.58	1
Studies comparing PD to APS								
Walter et al., 2003	25	NA		28.7 (14.5)	91	96	"	"
			16 MSA	36.3 (16.6)*				
			9 PSP	56.5 (19)*				
Behnke et al., 2005	102	NA		"	"	"	0.964	"
			34 MSA	"			0.95	-
			21 PSP	"				
Studies comparing PSP and CBD								
Walter, Dressler et al., 2004	NA	NA	13 PSP	43.5 (20.1)*	88	100	"	"
			8 CBD	39.8 (24.6)*				
Studies within the PD-group, without controls								
Berg, Siefker et al., 2001	112	NA	NA	16[1]	91		NA	NA
Berg et al., 2004	27	NA	NA	26.3 (11.7)6	NA		NA	NA
				49.2 (21.3)6 #				
Schweitzer et al., 2005	16	NA	NA	16 (10)	81		NA	NA
				26 (10) #				

Footnotes

1 Columbia University Rating Scale (SD)
2 C=relatives to PD patients
3 C=asymptomatic parkin gene mutation carriers
4 PPV for APS
5 PPV for PD
6 UPDRS I-III
* =severity of APS
# =at five years follow up
- =not stated

Abreviations:

APS= atypical parkinsonian syndromes
CBD=corticobasal degeneration
PD=Parkinson's disease
MSA=multiple system atrophy
NA=not applicable
TCS=Transcranial Sonography
NPV=negative predictive value
PPV=positive predictive value
PSP=progressive supranuclear palsy
SD=standard deviation
Se=sensitivity
Sp=specificity
UPDRS=Unified Parkinson's Disease Rating Scale

Register Now for One of The *Movement* Disorder Society's Educational Activities

Clinical Features, Diagnosis, Pathophysiology and Treatment of Restless Legs Syndrome

March 17, 2006 - Zürich, Switzerland
Zürich Marriott Hotel
Workshop Director: Claudia Trenkwalder, MD

Restless legs syndrome (RLS) is a common disorder that is under diagnosed. This course will provide the participants with information on RLS epidemiology, diagnosis, differential diagnosis, and treatment. Using lectures, case–based discussions and video examples of clinical phenomena, this course will focus on the clinical features of the restless legs syndrome and provide the clinician with diagnostic criteria, differential diagnosis, and describe sleep phenomena such as periodic limb movements.

For more information or to register for the above educational offering please visit the MDS Web site at www.movementdisorders.org or contact MDS via phone at +1 414-276-2145 or via e-mail at info@movementdisorders.org.

Novel Delivery of MAO-B Inhibition

As presented at The *Movement* Disorder Society's 9th International Congress of Parkinson's Disease and Movement Disorders

This program has been designed to increase the level of knowledge of physicians regarding issues surrounding the use of disease modifying therapies in the management of Parkinson's disease, with the ultimate goal of improving the overall health of patients with PD.

At the conclusion of this activity, participants should be able to:
1. Discuss the use of MAO-B inhibitors in the treatment of Parkinson's disease;
2. Explain the use of novel methods of delivery of MAO-B in Parkinson's disease;
3. Differentiate oral compounds from novel MAO-B delivery.

To participate in this enduring activity, please log on to www.pdadvances.com to partake in the webcast presentations. Instructions for receiving CME credit are located on the activity link.

This activity is jointly sponsored by The *Movement* Disorder Society and MDG Development Group.

MDS Members Receive 2005 Annemarie Opprecht Parkinson Award

MDS is pleased to announce that two of our members have been selected by the Prize Committee of the Annemarie Opprecht – Foundation to receive the Annemarie Opprecht Parkinson Award to benefit medical related research in the field of Parkinson's disease.

The 2005 Award recipients have each made lifelong contributions to the international advancement of research in Parkinson's disease. The recipients are:

Professor Stanley Fahn, MD of the Neurological Institute at Columbia University Medical Center in New York, NY, USA, was selected for his submission of the paper, "Levodopa and the progression of Parkinson's disease," published in the *New England Journal of Medicine* and also for his pioneering work in the search for the pathogenesis and treatment of Parkinson's disease for many years.

Professor Zbiginiew K. Wszolek, MD of the Department of Neurology at the Mayo Clinic in Jacksonville, Florida, USA, was selected for his submission of the paper, "Mutations in LRRK2 cause autosomal-dominant parkinsonism with pleomorphic pathology," published in *Neuron* and also for his pioneering work in the search for the pathogenesis and treatment of Parkinson's disease for many years.

The Awards were presented at the Swiss Neurological and Swiss Neurological Societies Joint Conference on Oct. 28, 2005 in St. Gallen, Switzerland. Each recipient received 50,000 Swiss Francs (approximately $40,000 USD).

The members of the 2005 Prize Committee include Prof. Mathias Sturzenegger, Switzerland (President); Prof. Hans-Peter Ludin, Switzerland, PD; Dr. Joseph A. Ghika, Switzerland; Prof. José Obeso, Spain; Prof. Anthony H.V. Schapira, Great Britain; Prof. Werner Poewe, Austria; Prof. C. Warren Olanow, USA; and Prof. Pierre Pollak, France.

Details announcing the 2008 Annemarie Opprecht Parkinson Award will be posted on the Foundation's Web site, www.opprecht-foundation.com in 2006.

The Annemarie Opprecht – Foundation was established in 1998 and sponsored by Annemarie Opprecht, a Swiss philanthropist. The specific aim of the Foundation is to promote medical, or medical related research in the field of Parkinson's disease on an international level. Therefore, the Foundation presents at regular intervals the Annemarie Opprecht Parkinson Award in the amount of 100,000 Swiss francs. The award will be presented for the third time in the year of 2005. Previous awards were presented in 1999 and 2002. For more information about the Annemarie Opprecht – Foundation, visit www.opprecht-foundation.com.

Practical Management of Motor Complications in Parkinson's Disease Course in Lisbon, Portugal

— Joaquim Ferreira, MD, Lisbon, Portugal

The first European MDS course on Practical Management of Motor Complications in Parkinson's disease was held on October 14, in Lisbon, Portugal. This course followed, with minor changes, the program of previous motor fluctuations MDS sponsored courses held in the United States. The faculty were Joaquim Ferreira (Lisbon), Philippe Damier (Nantes), Olivier Rascol (Toulouse), Francesc Valldeoriola (Barcelona) and Cristina Sampaio (Lisbon). The course was partly supported by an unrestricted educational grant from Novartis Neuroscience Portugal and The Health Sciences Institute of the Portuguese Catholic University.

The course addressed the theoretical aspects of the pathophysiology of motor complications to the more practical phenomenology of motor and non-motor fluctuations, as well as the spectrum of therapeutic interventions available. There was also room to discuss possible new interventions likely to be available in the near future. Apart from the more formal presentations, the audience had the opportunity to discuss, in smaller work groups, different case simulations that depicted frequent clinical problems (e.g. on-off phenomena, falls, dyskinesias, tremors, hallucinations, etc.). Once again, in accordance with the conclusions of the Education Committee survey, the enthusiasm and participation during the case-simulations discussions were favourable to this more interactive format.

The number of participants (n=68) exceeded the organizers best expectations. The majority were Portuguese, but there were also participants from other European countries who were mainly neurologists and neurology residents. Although it is difficult to conclude which were the main motivating factors to participate in this educational initiative, it seems that even for neurologists, the topic of motor fluctuations still raises interest due to its immediate practical implications.

The success of this initiative, measured by the number of attendees, reinforces the notion that there is need for educational initiatives in the field of Parkinson's disease. This course also allowed the promotion of MDS as the international forum for Movement Disorders in countries like Portugal and Spain where there is a clear dissociation between the number of neurologists interested in Movement Disorders and the number of MDS members.

Announcements

American Parkinson Disease Association Research & Fellowship Grant Announcements for 2006-2007

APDA announces that funding for Parkinson's disease research will be available in the following areas:
Advanced Centers for Research - $100,000 per year for 5 years
George C. Cotzias Fellowship - $80,000 per year for 3 years
Roger Duvoisin Grant - $80,000 per year for 2 years
Research Grants - $50,000 for one year
Postdoctoral Fellowships - $35,000 for one year
Deadline for submission is March 1, 2006

For more information consult the APDA website www.apdaparkinson.org or contact Paul Maestrone, DVM, Director of Scientific & Medical Affairs via phone at 718 981-8001 or 800 223-2732 or email pmaestrone@apdaparkinson.org

Managing Parkinson's Disease: Turning Off to On - An Internet-Based CME Activity

The *Movement* Disorder Society (MDS) announces an Internet-based CME activity co-sponsored by MDS and Scienta Healthcare Education® entitled "Managing Parkinson's Disease: Turning Off to On". This activity is supported by an unrestricted educational grant from Mylan Bertek Pharmaceuticals, Inc.

This online CME activity is based on presentations delivered by faculty at the Kickoff Seminar entitled "Managing Parkinson's Disease: Turning Off to On" held during MDS's 8th International Congress of Parkinson's Disease and Movement Disorders in Rome, Italy.

The faculty for this course consists of co-chairs William C. Koller, MD, PhD and Fabrizio Stocchi, MD, PhD from Rome, Italy plus presenters Andrew J. Lees, MD, London,

CONTINUED ON PAGE 14

Continued from page 13...

United Kingdom and Mark A. Stacy, MD, Durham, North Carolina, USA.

This program will be archived online through February 2006. You may participate at any time by visiting www.conferenceseek.com/parkinsons.

The American Parkinson Disease Association (APDA) Launches www.youngparkinsons.org

The American Parkinson Disease Association (APDA) has launched a new Web site specifically targeted to the issues and concerns of the younger patient population (ages 21-50). In addition to a wealth of information and resources for living well with PD, the site also includes a photo gallery of young people with Parkinson's and their inspirational stories, the opportunity to be connected one-on-one to other young people with PD and a library of downloadable APDA educational materials.

Please visit us at www.youngparkinsons.orgArticles\Professional Notices - Announcements.doc

Job Openings

University of Texas Southwestern Medical Center Clinician-Educator

The Department of Neurology at the University of Texas Southwestern Medical Center at Dallas is recruiting a clinician-educator with expertise in Movement Disorders to join the faculty at the assistant professor level. Applicants should have completed at least one year of fellowship training in the field of movement disorders from a reputable institution. The successful applicant will be highly skilled in the clinical evaluation and management of patients with movement disorders. Proficiency in the use of botulinum toxin injections is desirable, but is not required for this position.

The Department of Neurology maintains an active Movement Disorders program with abundant opportunities for clinical research as well as patient care. The successful applicant will be encouraged to participate actively in the ongoing clinical research endeavors of the section, and he/she will be given the opportunity to develop independent (or collaborative) projects based on personal interests within the field. Applicants should have a desire to teach medical students and neurology residents as teaching activities constitute a major focus of the Neurology Department.

Send CV to: Richard B. Dewey, Jr., M.D., Director, Clinical Center for Movement Disorders, UT Southwestern Medical Center, 5323 Harry Hines, Dallas, TX, 75390-9036. UT Southwestern Medical Center is an equal opportunity employer.

BC/BE Neurologist Opportunity

Large neurology practice seeks BC/BE neurologist with specialty training in movement disorders to join a group of 3 BC neurologists and 2 nurse practitioners. This well established, innovative, adult neurology practice is designated by the National Parkinson Foundation as a Parkinson Care Center, has a large clinical study department, and a non-profit Foundation to assist with the social service and patient/community education issues of neuro patients in southern Nevada. Opportunity to participate as sub-I in current clinical studies and as PI or sub-I in new clinical trials.

* Competitive Salary
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Henderson/Las Vegas is located in the fastest growing county in the US. Offers an excellent quality of life, affordable housing, year-round recreational activities including skiing, rock climbing, boating, fishing and numerous cultural activities (art, theater, dance, music) aside from the obvious Las Vegas night life.

Send your curriculum vitae in confidence to: Karla Jay, Administrator. Fax: (702)614-8356 or E-Mail: KJay@spinal.net.

Department of Neurology Faculty Position
The Johns Hopkins University School of Medicine

The Department of Neurology at The Johns Hopkins University School of Medicine is seeking Neurologists with particular interests in Parkinson's disease and Movement Disorders for full time, tenure track faculty positions. Academic rank and salary will be commensurate with qualifications and experience. Applicants should be board eligible or certified Neurologists with appropriate subspecialty training. Faculty members are expected to have or to establish active, clinical research programs and participate in teaching residents and medical students.

Interested individuals please send a letter describing current and future interests, a current curriculum vitae, and three letters of recommendation to:

Dr. Ted M. Dawson, MD, PhD
Department of Neurology
Johns Hopkins University School of Medicine
733 North Broadway, Suite 731
Baltimore, MD 21205

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2006

***February 3-5, 2006**
Gait and Mental Functions. Madrid, Spain. Contact: The Secretariat, International Congress on Gait & Mental Function, Kenes International, 17 rue du Cendrier, P.O. Box 1726, Geneva 1, CH-1211 Switzerland; TEL: +1 41-22-908-0488; FAX: +1 41-22-732-2850; E-mail: gait@kenes.com; Web site: www.kenes.com/gait

February 9-10, 2006
British Neuropsychiatry Association 2006 Meeting: Sleep, Neuropsychiatry of Schizophrenia and Functional Movement Disorders. London, United Kingdom. Contact: Jackie Ashmenall, The British Neuropsychiatry Association, St. Aidan, Ealing Green, Ealing, London, W5 5EN United Kingdom; TEL: +1 020-8840-9266; FAX: +1 016-2184-3334; E-mail: gwen.cutmore@lineone.net; Web site: www.bnpa.org.uk

***February 10-11, 2006**
Second International Symposium on Paediatric Movement Disorders. Barcelona, Spain. Contact: Technical Secretariat, Calvet, 30, Barcelona, 08021 Spain; TEL: +1 34-932-01-7571; FAX: +1 34-932-01-9789; E-mail: secretaria@suportserveis.com; Web site: www.suportserveis.com

***February 21-22, 2006**
DLB/PDD at a Crossroads. Washington, DC, USA. Contact: Howard Hurtig, MD, 330 S. 9th Street, Philadelphia, PA 19107 USA; TEL: +1 215-829-8407; FAX: +1 215-829-6606; E-mail: hihurtig@pahosp.com; Web site: www.pdd-dlbcrossroads.com

***February 22-26, 2006**
World Parkinson Congress. Washington, DC, USA. Contact: World Parkinson Congress, 710 W. 168th Street, Rm 314, New York, NY 10032 USA; TEL: +1 212-923-4700; FAX: +1 212-923-4778; E-mail: info@worldpdcongress.org; Web site: www.worldpdcongress.org

March 6-8, 2006
International Symposium on Clinical Neurology and Neurophysiology. Tel Aviv, Israel. Contact: ISAS International Seminars, P.O. Box 574, Jerusalem, 91004 Israel; TEL: +1-972-2-6520574; FAX: +1 972-2-652-0558; E-mail: conventions@isas.co.il; Web site: www.neurophysiology-symposium.com

***March 15-17, 2006**
Birmingham Movement Disorders Course 2006. Birmingham, United Kingdom. Contact: University of Birmingham, City Hospital, Birmingham, B18 7QH United Kingdom; TEL: 1 44-121-507-4073; FAX: +1 44-121-507-5442; E-mail: susan.pope@swbh.nhs.uk; Web site: www.parkinsonsdisease.org.uk

April 1-8, 2006
American Academy of Neurology 58th Annual Meeting. San Diego, CA, USA. Contact: American Academy of Neurology, 1080 Montreal Avenue, St. Paul, MN 55116 USA; TEL: +1 651-695-1940; E-mail: web@aan.com; Web site: www.aan.com

April 6-8, 2006
38th International Danube Symposium for Neurological Science and Continuing Education. Brno, Czech Republic. Contact: TA-SERVICE, Hlinky 48, 603 00 Brno, CZ; TEL/FAX: + 00 420 543 211 134; E-mail: tarabova@traveller.cz; Web site: www.ta-service.cz/danube

April 19-21, 2006
Association of British Neurologists. Brighton, England. Contact: Association of British Neurologists, Ormond House, 27 Boswell Street, London WC1N 3JZ England; TEL: +1 020 7405 4060; E-mail: info@theabn.org; Web site: http://www.theabn.org/index.php

May 17-19, 2006
Targeting Adenosine A2A Receptors in Parkinson's Disease. Boston, MA, USA. Contact: Galina Slezinger, MassGeneral Institute for Neurodegenerative Disease, Boston, MA USA; TEL: +1 617-724-9611; FAX: +1 617-724-1480; E-mail: michaels@helix.mgh.harvard.edu; Web site: www.A2APD.org

June 11-16, 2006
10th International Child Neurology Congress. Montreal, Quebec, Canada. Contact: Congress Secretariat, 759 Square Victoria, Suite 300, Montreal, Quebec, Canada; TEL: + 1 514-286-0855; FAX: +1 514-286-6066; E-mail: info@eventsintl.com; Web site: www.icnc2006.com

June 12-14, 2006
5th International Congress on Mental Dysfunction in Parkinson's Disease. Amsterdam, The Netherlands. Contact: J. Desel-Willems, SCEM Conference Services, P.O. Box 21, Tricht, 4196 ZG The Netherlands; TEL: +1 31-345-57-66-42; FAX: 1-31-345-57-17-81; E-mail: scem@scem.nl; Web site: www.mdpdamsterdam.nl

***September 1-6, 2006**
10th European Federation of Neurological Societies Congress. Glasgow, Scotland. Contact: EFNS, Neurological Hospital Rosenhugel, Riedelgass 5, A-1130, Vienna, Austria; TEL: + 43-1-880-00-270; FAX: + 43-1-88-92-581; E-mail: headoffice@efns.org

September 10-14, 2006
28th International Congress of Clinical Neurophysiology. Edinburgh, Scotland. Contact: Michelle Kane, Concorde Services Ltd., 4B, 50 Speirs Wharf, Port Dundas, Glasgow G4 9TB; TEL: + 44-141-3310123; FAX: + 44-141-3310234; E-mail: info@iccn2006.com

October 7-12, 2006
Congress of Neurological Surgeons 56th Annual Meeting. Chicago, IL, USA. Contact: Congress of Neurological Surgeons, 10 North Martingale Road, Suite 190, Schaumburg, IL 60173 USA; TEL: +1 847-240-2500; FAX: +1 847+240-0804; E-mail: info@1cns.org

October 8-11, 2006
131st Annual Meeting of the American Neurological Association. Chicago, IL, USA. Contact: American Neurological Association, 5841 Cedar Lake Road, Suite 204, Minneapolis, MN 55416 USA; TEL: +1 952-545-6284; FAX: +1 952-545-6073; E-mail: lorijanderson@msn.com; Web site: www.aneuroa.org

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