



Moving Along

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Prevention of Falls in Parkinson's disease

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Falls are a common and devastating consequence of Parkinson's disease (PD). Prospective surveys showed high rates of falls that clearly exceeded those of community-dwelling healthy elderly persons. The morbidity of falls is considerable, among others, because of hip fractures and other serious injuries. "Minor" injuries such as bruises or lacerations are even more common. Importantly, the disease appears to progress at a faster rate once falls are present, and overall survival of fallers is reduced. This increased mortality is partially explained by the occurrence of lethal falls, but also results from secondary immobilization, which reduces general fitness and increases the risk of cardiovascular disease. Furthermore, reduced mobility may lead to osteoporosis (which further increases the fracture risk) and deprives patients of their independence and social contacts. These problems are aggravated by a commonly present and incapacitating fear of renewed falls. The quality of life is markedly diminished and eventually, falls may lead to nursing home placement. In addition to the impact on physical and mental well-being of affected patients with PD, the associated costs for the society are substantial.

Against this background, attempts to prevent falls are obviously important. Adequate falls prevention calls for insights into the pathophysiology underlying falls in PD. Important causes of falls in PD include gait disturbances (particularly freezing), difficulty performing transfers (e.g. rising from a chair) and diminished ability to perform dual tasks. In addition to these "disease-specific" mechanisms, fall risks in older PD patients are aggravated by "generic" age-related factors such as sedative medication or poor vision. Because of this complex multifactorial pathophysiology, "monodisciplinary" interventions are unlikely to be very effective. For example, dopaminergic therapy can be used to relieve some of the dopa-responsive gait difficulties (for example, OFF period freezing), but is generally unable to prevent falls altogether. In fact, falls may paradoxically increase due to adverse effects of dopaminergic therapy, such as violent dyskinesias or orthostatic hypotension. We feel that falls in PD are best prevented using a multidisciplinary approach tailored to the specific risk factors identified in each individual patient. There is mounting evidence to support the use of physical therapy as part of this multidisciplinary and multifactorial approach. Other components of a comprehensive falls prevention strategy could include occupational therapy, treatment of visual problems and optimizing drug treatment (including sedatives). Scientific evidence to support such a is already available for the general elderly

minimizing the use of benzodiazepines or other multidisciplinary falls prevention strategy population. Several large falls prevention studies in PD are currently underway, both at our own Parkinson's centre and at various other international centres, so more detailed and evidence-based information on the prevention and treatment of falls in PD should become available in the following years.



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The current issue of *Moving Along*, the official newsletter of The *Movement Disorder Society*, brings to you some of the highlights of this year's 11th International Congress of Parkinson's Disease and Movement Disorders, which was held in Istanbul from June 3 - 7. Professor Murat Emre, together with the Congress Local Organizing Committee and the Congress Scientific Program Committee did a wonderful job of combining cutting-edge science and useful clinical information against the memorable backdrop of one of the most exciting cities in the world. It was certainly an event that the participants will never forget. We hope that the International Congress recap in this issue will bring back some fond memories to those who were there, and inspire those who missed it to attend next year's conference, which will be held June 22-26, 2008 in Chicago, IL, USA.



Irene Litvan, MD



Thomas Gasser, MD

Both the cover story and the controversy of this issue deals with explicitly clinical topics. Given the almost overwhelming progress in the basic sciences, from genetics and cell biology to molecular imaging, stem cells and gene therapy, it is worth remembering that the vast majority of members of the Society deal with everyday clinical problems that cannot wait for molecular geneticists or cell biologists to develop novel treatment strategies. Gait unsteadiness and falls in Parkinson's disease are some of them, which are becoming even more pressing as both pharmacologic treatment and Deep Brain Stimulation enables more and more patients to remain ambulatory until late stages of the disease. Dr. Bastiaan Bloem from Nijmegen reviews some of these complex issues.

Similarly, this issue's controversy deals with a question many of us face in our day-to-day practice: should EMG-guidance be used for botulinum toxin injections in the treatment of dystonia and spasticity? There is no simple yes or no answer to this seemingly simple question, but its various facets are scholarly presented by the "combatants", Drs. Jankovic and Fishman.

We hope that in the tradition of this newsletter, it will provide you with some interesting, yet relaxed summer reading material and wish you a good start into the new academic year.



LETTERS TO THE EDITORS

Your Comments and Questions Are Always Welcome

Editorial Policy

Address your communications to:

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 responses in the "Letters to the Editor" section. All materials submitted become the property of MDS.

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Dear Colleagues,

The truly international nature of The *Movement* Disorder Society (MDS) remains one of its greatest strengths. I am happy to report our membership is becoming more diverse as the number of

Movement Disorder specialists and affiliated organizations around the world join MDS. This year we've experienced a 19% increase in membership. As of June 30, 2007, MDS has 2,701 members, an increase of 432 members since June 30, 2006 when MDS had 2,269 members. This is an exciting time for the Society and its members from 75 countries who are coming together to exchange ideas. As more colleagues around the globe get involved, the more we are able to encourage scientific developments in our field and improve the care of patients suffering from the many neurological diseases that result in Movement Disorders.

This excitement was palpable at the recent International Congress in Istanbul when about 3,200 attendees from 81 different countries met to learn about the latest in Movement Disorders. I would like to congratulate Murat Emre and his colleagues for their hard work in making this such a wonderful event. At the Istanbul International Congress, 22 MDS Committees took advantage of their time there to meet and continue their work on various MDS projects. I want to express my gratitude to the many committee and section chairs and members who work tirelessly pursuing our mandates of educating physicians throughout the world and raising awareness of our specialty. It is the diligent work of these committees that help advance the goals of the Society and its membership around the world. I'd like to specifically highlight some of the MDS initiatives that are fueling this membership growth and wider participation around the globe.

MDS advances regional interests

MDS created Regional Sections as a way to advance the unique interests of our members in different parts of the world. Providing regional educational programs for members as well as addressing regional issues are important functions of MDS Sections. Each section is governed by an Executive Committee of members from that region.

The MDS European Section (MDS-ES), under the chairmanship of Wolfgang Oertel, continues to offer numerous educational activities around Europe. The MDS-ES is presently developing a proposal for a Movement Disorders Summer School for young neurologists to be held in Marburg, Germany in

July 2008. As a way to encourage junior neurologists to spend time in specialist centers, the MDS-ES is considering setting up a Visiting Fellowship Program. In addition, at the Istanbul meeting, the MDS International Executive Committee (IEC) has given MDS-ES authority to use € 70,000 to support educational activities in Eastern Europe.

The MDS Asian and Oceanian Section (MDS-AOS), formed in 2005 and currently chaired by Robert Iansek, will be hosting its first regional meeting in Singapore, October 20-22, 2007. To guide future programming in the region, the Section is developing an educational member needs survey. Also at the Istanbul meeting, the MDS IEC approved a budget of \$100,000 USD to be provided to the MDS-AOS for educational outreach to countries in their region.

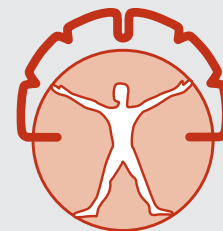
Another region that MDS would like to highlight in our Outreach and Educational mandate is Latin America. For the good of the field and the large number of patients and physicians in this region, we are hoping to make important progress in advancing these priorities over the next couple of years. To this end we are in the process of polling interested parties to determine how best to proceed.

MDS offers opportunities for colleagues in underserved regions

Global diversity of the MDS membership is critical to the future of Movement Disorders. As such, we are expanding our focus on the creation of new member benefits and extending the Society's impact in underserved regions. The Waived Dues Membership 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, please visit the MDS Web site: www.movementdisorders.org.

Waived Dues members now receive the MDS online journal and registration to the International Congress free of charge as a benefit of membership. MDS is also going to be developing a program whereby regular members who do not need to receive a paper copy of the Journal (e.g., if this is also available through their department) can have it redirected to another recipient, for example, a Waived Dues member. This offering may be organized through our Affiliate Membership program (see below).

The MDS Visiting Professor Program is a program that provides educational opportunities in Movement Disorders to regions of the world that are under-represented in the Society and do not



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11th International Congress Proves to be a Huge Success

Istanbul, Turkey was not only the meeting place for the 11th International Congress, but it was also where the East met the West, a meeting of the minds, and a meeting of phenomenal success.

Through the halls of the Istanbul Convention and Exhibition Centre, about 3,200 delegates from around the world convened to learn about the latest developments in the world of Movement Disorders.

The meeting began on Sunday, June 3 with industry-supported Opening Symposia, which are popular and always in demand. In the midst of the Opening Symposia, the Opening Ceremony and Welcome Reception took place, truly introducing delegates and faculty to the welcoming nature and culture of Istanbul. The Chair of the Congress Local Organizing Committee, Murat Emre, began by introducing Istanbul, and described the years of planning it took to organize the International Congress. He then introduced the guest speaker, Prof. Erman Tuncer, senior advisor to the mayor of Istanbul, who welcomed everyone to the city and urged people to take advantage of all that Istanbul has to offer.



A traditional Turkish dance group performs during the Opening Ceremony

MDS President Anthony Lang followed, welcoming delegates, faculty, and guests alike to what promised to be an International Congress of knowledge and learning. Dr. Lang presented Honorary Membership Awards to Eldad Melamed and Ali H. Rajput. C. Warren Olanow was also honored with the President's Distinguished Service Award for his dedication and continued support of The *Movement Disorder Society* and to the field of Movement Disorders.

The "Fire of Anatolia," a traditional Turkish dance group, entertained the crowd by



11th International Congress delegates participate in one of the many popular sessions held in the Anadolu Auditorium

performing four dances, one from each region of Turkey. When the Opening Ceremony came to a close, attendees walked the red carpet to mingle and feast on traditional Turkish foods at the Welcome Reception which took place in the Rumeli Gardens. The beautiful view of the Bosphorous combined with the entertaining band provided a wonderful evening.

The Scientific Program began on Tuesday, June 5 and featured 147 distinguished faculty participating in a wide variety of Plenary, Parallel, Video, Skills Workshops and Meet the Expert Sessions. These sessions proved again to be popular components of the MDS International Congress.

New this year were the How-To-Do-It Sessions, demonstrating appropriate evaluation techniques for patients with Movement Disorders. Highlights of Posters sessions and Oral Platform Presentations were also added this year based on feedback from previous International Congresses. Four quality Teaching Courses rounded out the scientific offerings of the 11th International Congress.

This International Congress boasted 972 posters, displayed over three days. Delegates took time each day and viewed the work of their colleagues, asked questions and engaged in intriguing discussions in the Poster Hall.

Twenty-one companies exhibited at this year's International Congress including pharmaceutical companies, supporters, patient organizations, medical publishers and medical services/equipment companies. The exhibit hall is always a great place to take a break from the day of sessions to network and meet colleagues and friends.

The Gala Event on Wednesday, June 6, took place at the Çirğan Palace Kempinski located on the shores of the Bosphorus overlooking the ancient city of Istanbul. The magnificent views on the outside and the stunning architectural components both on the exterior and interior of the Palace made for an enjoyable evening for the participants. Sibel Tuzun, a famous Turkish pop/rock singer brought everyone to their feet during her upbeat concert performance after dinner. A traditional Turkish belly dancing routine closed the Gala Event.



Delegates take in all of the scenic views of the Bosphorus during the Gala Event reception held at the Çiragan Palace

The *Movement Disorder Society* would like to extend their gratitude to faculty, supporters, exhibitors and delegates for their contributions to making the 11th International Congress of Parkinson's Disease and Movement Disorders a monumental success.

Mark your calendars! MDS is already planning for the 12th International Congress in Chicago, IL, USA on June 22-26, 2008. Please visit our Web site for current details regarding this International Congress at www.movementdisorders.org/congress/congress08/ or contact the International Secretariat at congress@movementdisorders.org with any questions.



Delegates take time out of their busy day to review the cutting-edge research in the poster hall

2007 MDS Awards Announced

During the 11th International Congress of Parkinson's Disease and Movement Disorders, June 3-7, 2007, in Istanbul, Turkey, The *Movement* Disorder Society was proud to honor the following 2007 MDS awards recipients:

President's Distinguished Service Award

The President's Distinguished Service Award is given in recognition of extensive and notable service to The *Movement* Disorder Society (MDS).

2007 Recipient

C. Warren Olanow
New York, NY, USA

Previous recipients of the President's Distinguished Service Award include Eduardo Tolosa (2006), Stanley Fahn (2005) and Mark Hallett (2004).

Honorary Member Award

The Honorary Member Awards recognize individuals who have made extraordinary contributions to the field of Movement Disorders or otherwise to The *Movement* Disorder Society.

2007 Recipients

Eldad Melamed	Ali H. Rajput
Petah Tiqva, Israel	Saskatoon, SK, Canada

Previous recipients of the Honorary Member Award (formerly the Career Award) include Niall Quinn (2006), Patrick McGeer (2006), Peter Jenner (2005), Thomas Chase (2005), Roger C. Duvoisin (2004), Hiroshi Shibasaki (2004), Yves Agid (2004), Stanley Fahn (2002), Oleh Hornykiewicz (2002) and Gerald Stern (2002).

Junior Award

Two Junior Award recipients were selected based on their significant contribution to clinical and basic science research in the field of Movement Disorders. One award was presented for excellence in clinical research, and another for excellence in basic science research.

2007 Recipients

Christine Daniels, Clinical Research Kiel, Germany	Myriam Escobar-Khondiker, Basic Science Research Marburg, Germany
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Previous recipients of the Junior Award include Andre Troiano (Clinical 2006), Akiko Imamura (Basic Science 2006), Peter Novak (Clinical 2005), Nutan Sharma (Basic Science 2005), David Williams (Clinical 2004), Pedro Gonzalez-Alegre (Basic Science 2004), Sylvie Raoul (Clinical 2002) and Jan Raethjen (Basic Science 2002).

Dr. Anthony Lang presents Dr. C. Warren Olanow with the President's Distinguished Service Award during the Opening Ceremony



Travel Grants

MDS Travel Grants are offered annually in partial support of International Congress delegates in financial need to facilitate their travel to and participation in the International Congress of Parkinson's Disease and Movement Disorders.

2007 Recipients

Annu Aggarwal, India
Phalguni Alladi, India
Akshay Anand, India
Petra Bartova, Czech Republic
Martina Bockova, Czech Republic
Sara Biguzzi, Italy
Sarah Camargos, Brazil
Suresh Chandran, India
Abigail Collins, USA
Michail Kalaitzakis, UK
Natlada Kanjanasut, Thailand
Samson Khachatryan, Armenia
Natasia Klepac, Croatia
Katya Kotschet, Australia
Norbert Kovacs, Hungary
Magdalena Kraus, Germany
Monica Kurtis, USA
Praween Lolekha, Thailand
Jadranka Maksimovic, Serbia and Montenegro
Martin Nevrlý, Czech Republic
Martin Niethammer, USA
Alexander Schmidt, Germany
Susanne Schneider, UK
Aasef Shaikh, USA
Vimal Stanislaus, Australia
Irene Taravini, Argentina
Zaruhi Tavadyan, Armenia
Emma Thornton, Australia
Jasper Visser, The Netherlands
Annemarie Vlaar, The Netherlands
Hana Vranova, Czech Republic
Harrison Walker, USA
Richard Walsh, Ireland
David Weise, Germany
Zhang Yuqing, China

Preparation for the 1st Asian and Oceanian Parkinson's Disease and Movement Disorders Congress (AOPMC) is progressing satisfactorily under the guidance of Dr. Louis Tan in Singapore. At the recent MDS 11th International Congress held in Istanbul, Turkey, the Asian & Oceanian Section (AOS) was very pleased that the MDS leadership provided them with a budget of \$100,000 USD for educational initiatives in the region over the next 12 months. Also, as the result of a previous supported meetings grant from MDS, we have been able to offer 15 Travel Grants for young scientists and specialists to attend the 1st AOPMC Congress in Singapore on October 20-22, 2007. For additional information or to download the AOPMC Travel Grant application, please visit the following Web site: www.movementdisorders.org/aos/aopmc07.php.



The AOS Officers, as well as the MDS Education Committee, have approved a questionnaire to be administered to the Asian & Oceanian Section of The *Movement* Disorder Society to try and ascertain the educational needs and requirements of our region. We plan to disseminate this survey to as many people involved with Movement Disorders within the region as possible, whether they are current members of MDS or non-members, to try to develop a basis for educational programs in the region.

An Education Committee is currently in the process of being instituted within the AOS under the leadership of Drs. Louis Tan and Shu-Leong Ho in order for us to manage the educational funds.

The 1st Asian and Oceanian Parkinson Disease and Movement Disorders Congress will run in conjunction with the 6th International Symposium of the Asian and Pacific Parkinson Association Congress. We are also extremely pleased to have received funding from the National Parkinson Foundation to assist in the running of this symposium which is directed primarily towards people with Parkinson's, carers and healthcare professionals. These funds will be used to run a two-day education program for Allied Health staff who are actively involved in the management of people with Parkinson's looking at multidisciplinary approaches to management including rehabilitation and medication optimization.

We are all extremely pleased at the way in which the AOS is progressing and we thank MDS for its ongoing support for our future development.

Kind regards,

Professor Robert Iansek, PhD, FRACP
Chairman, MDS-AOS



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Web site: www.aopmc.com.sg

1st Asian and Oceanian Parkinson's Disease and Movement Disorders Congress (AOPMC)

October 20-22, 2007, Suntec International Convention & Exhibition Centre, Singapore

DELEGATES' TRAVEL GRANT PROGRAMME

The *Movement* Disorder Society (MDS) is pleased to offer a maximum of 15 travel grants of S\$1,000 (Singapore Dollars) each to help delegates from emerging economies defray travel expenses associated with the 1st Asian and Oceanian Parkinson's Disease and Movement Disorders Congress (AOPMC) in Singapore, October 20-22, 2007. The congress registration fees for successful applicants of the travel grants will also be waived.

To apply for the AOPMC travel grant, applicants must submit a completed application form, providing full contact details (including address, e-mail and a contact number), age, current position, medical experience/training as well as a copy of the abstract(s) submitted for the meeting. A blank application form can be downloaded from the following Web site: www.movementdisorders.org/aos/aopmc07.php.

Priority will be given to residents and trainees with five or less years experience as healthcare professionals or scientists from emerging economies. Completed application forms must be mailed or faxed to the AOPMC Congress Secretariat no later than September 1, 2007. Successful applicants will be notified via e-mail by September 15, 2007.

European countries experience considerable differences in service provision for Movement Disorders patients, and there are still many areas where Movement Disorders are treated by general neurologists who have little or no access to Movement Disorders education. Two-fifths of the members of MDS work in Europe, and this provides us with a large resource of skilled individuals able to promote the work of The Society within the continent. Early in 2007 we completed the major task, initiated by MDS-ES Past-Chairman, Niall Quinn, of confirming a list of potential speakers for MDS educational initiatives, including special areas of clinical and academic interest and languages spoken, to help us to best meet the needs of our underserved colleagues.



Several new MDS-ES initiatives are now at the planning stage to help us increase the visibility of our sub-specialty within Europe:

- MDS has granted the European Section a budget of €70,000 specifically for use within underserved countries in Eastern Europe. The MDS-ES Executive Committee will be discussing the most effective ways to use this budget and we will consult our colleagues at the EFNS who already have an established outreach program to these countries.
- A proposal for a scheme of MDS-ES Visiting Fellowships is in the process of being finalized for launch in 2008. Twenty-five leading Movement Disorders centers have been identified to host visiting fellows for periods from one month up to one year. The MDS-ES Executive Committee will ratify the terms of the scheme and the list of host centers when we meet during the EFNS Congress in Brussels, Belgium, and the proposal will be forwarded to the MDS International Executive Committee for approval and advice on funding the scheme.
- A Summer School for young neurologists is in the planning stage and is provisionally scheduled for July 4-6, 2008 in Marburg, Germany. The target audience will be young neurologists who have not yet decided on their specialization within neurology. It is hoped to eventually involve specialists from Eastern Europe who will be able to modify the Summer School structure and materials for their own teaching. The course proposal is being sent to the MDS Education Committee for approval and if approved, the program will then be implemented by MDS-ES.
- A teaching video on basic Movement Disorders is being planned by MDS-ES, coordinated by Joaquim Ferreira, to be a freely available teaching resource on the MDS Web site.
- An online CME program based on the September 2006 Dopamine Transporter Imaging workshop held in London will be launched and an additional six workshops are planned during 2007-2008.

We hope that all these initiatives will come to fruition and have a substantial impact on the care of Movement Disorders patients throughout Europe over the coming years.

Wolfgang Oertel
Chairman, MDS-ES

More International Congress Travel Grants Offered in 2008!

During the recent 11th International Congress in Istanbul, The *Movement Disorder Society's* (MDS) leadership decided to increase the amount of Travel Grants offered for future Congresses. For the 12th International Congress, June 22-26, 2008 in Chicago, IL, USA, the Society will offer up to 60 Travel Grants! International Congress Travel Grants are to be used in partial support of and to facilitate delegate travel to and participation in the International Congress. These grants will be up to a maximum amount of \$1,000 USD each; registration fees will also continue to be waived for all Travel Grant recipients in 2008.

Save the Date!

Dopamine Transporter Imaging in Neurological Practice Workshops

For more information, or to register online, please visit www.movementdisorders.org



Marburg, Germany

November 2, 2007
Workshop Directors:
Wolfgang Oertel, MD
Helmut Höffken, MD

Naples, Italy

November 30, 2007
Workshop Director:
Paolo Barone, MD, PhD

Dopamine Transporter Imaging Workshops Coming in 2008!

Innsbruck, Austria
Madrid, Spain
Glasgow, Scotland
Toulouse, France

Should EMG be used Routinely in the Treatment of Dystonia? NO

—Joseph Jankovic, MD, Baylor College of Medicine, Parkinson’s Disease Center and Movement Disorders Clinic, Houston, TX, USA

The efficacy and safety of botulinum toxin (BTX) in the treatment of focal and segmental Movement Disorders is well established,⁶ but some areas of controversy, such as whether electromyography (EMG) is necessary to guide the injection into the target muscle, have not been resolved.⁵

Although EMG guidance is certainly useful in some instances, such as when the target muscle is difficult to identify by clinical examination, based on published studies and personal experience in thousands of patients treated with BTX in the Baylor Movement Disorders

Clinic since 1983, I contend that EMG has limitations and in most instances is not necessary for optimal results [Table].

Only one published study has specifically compared EMG vs. no-EMG in the treatment of dystonia.² The authors concluded that “a significantly greater magnitude of improvement” was present in patients treated with EMG-assisted method, but “EMG assistance did not further increase the number of patients improving compared to those injected clinically.” While the authors should be complimented for conducting such a challenging study, the flawed methodology of the study makes the results difficult to interpret. For example, the vast majority of the 52 cervical dystonia patients were previously treated with BTX, all with EMG guidance and

therefore, may have been unfavorably biased against non-EMG-guided approach. Other factors that may have contributed to this bias include the absence of auditory/visual feedback, normally used for EMG-guidance, and more severe dystonia in the non-EMG group as suggested by the requirement of a higher dose. In a post hoc analysis of patients included in the recently completed BTX-A vs. BTX-B trial,³ utilization of EMG did not confer additional advantage over clinically-guided injections.¹

Some clinicians, particularly those who use EMG, administer a single bolus injection to the target muscle rather than dividing the total dosage into multiple point injections. We favor the latter approach as multiple injections along the affected muscle and

as close as possible to the presumed endplate innervations zone are more likely to contain the biological activity within the target muscle. Although the anatomic location of the endplate is not known for most muscles, and cannot be reliably found by EMG, helpful anatomical guidelines are available.⁴

Using such anatomical landmarks rather than EMG has been reported to result in marked improvement, even in task-specific dystonias.⁸ EMG-guidance, however, is important or even essential in BTX treatment of some conditions, such as spasmodic dysphonia and certain task-specific dystonias,⁷ although in one recent study EMG-guided injections provided long-term benefit in performance ability in only 30 of 84 (36%) musicians.⁹

In the vast majority of patients with dystonia and spasticity, the involved muscles can be easily identified by appropriate clinical evaluation (description of the patient of the abnormal movement or posture and examination, including palpation).

Thus, the axiom “when you are in a hurricane you don’t need a barometer”, is an appropriate analogy in most cases when BTX treatment is contemplated. Although there are many reasons why I do not routinely use EMG in BTX therapy [Table], the most important reason is that even if (and that is “big IF”) EMG does provide better results, the minimal increase in improvement over the generally reported 90% benefit, does not justify the increased discomfort, time and expense of this approach.

“...if EMG does provide better results, the minimal increase in improvement over the generally reported 90% benefit, does not justify the increased discomfort, time and expense of this approach.”

Table

LIMITATIONS OF EMG-GUIDED BTX INJECTIONS

1. Need additional equipment (EMG needle, EMG machine)
2. More painful (larger diameter needles) than without EMG assistance
3. More time-consuming and cumbersome than without EMG assistance
4. More expensive than without EMG assistance
5. Determination of initial placement of EMG electrode is still dependent on clinical examination
6. If a muscle is obviously contracting and/or is hypertrophied, EMG is redundant
7. The actual anatomic location of the tip of the EMG needle cannot be verified
8. EMG does not differentiate between contractions produced by agonist versus antagonist muscles (reliance on EMG muscle discharge alone may lead to injection of the wrong muscle)
9. EMG may be misleading - patients often “tense” otherwise uninvolved muscles during EMG
10. Single bolus EMG-guided injection leads to a greater risk of spread to adjacent, unwanted muscles and structures
11. Higher physician reimbursement may be an important reason for the use of EMG
12. The results of BTX treatment without EMG are so good that the small additional improvement (even if proven) does not justify the use of EMG

Modified from Jankovic, 2001

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Should EMG be used Routinely in the Treatment of Dystonia? Yes

—Paul S. Fishman, MD, PhD, University of Maryland School of Medicine, Department of Neurology, Baltimore, MD, USA

Controversy surrounding the use of EMG during botulinum toxin injections centers on the treatment of cervical dystonia. Direct clinical study of this setting, although limited, does support the benefit of EMG guidance, particularly in complex and specific forms of cervical dystonia, such as head tilt and retrocollis.^{1,2} Experienced injectors have diverse training and preferences regarding EMG guidance, making it difficult to draw clear conclusions from comparison studies about the utility of the technique that are separate from those about the relative skills of the injectors.

I make no claim that adding EMG guidance will have a dramatic impact on highly skilled and experienced injectors such as the authors of these studies. I do, however, strongly advocate EMG guided injections for less experienced injectors for several important and practical reasons. First, EMG adds another separate piece of information along with clinical examination to help select involved muscles and make judgments regarding appropriate dosing. When patients return after initial injections with less than optimal results, EMG can help identify involved muscles that were insufficiently treated. This is particularly true of deeper muscles such as the scalenes, levator scapuli and paraspinus muscles.³

Second, EMG guidance, even for a superficial muscle such as the sternocleidomastoid (SCM), allows the injector the assurance that the injection is definitely within the muscle. Without EMG guidance, even a skilled injector can over-penetrate and puncture the SCM, extravasating toxin into deeper neck tissues, increasing the risk of dysphagia or dysarthria. Confidence in localization allows experienced injectors to identify injection sites quickly and safely, more than compensating for increased pain claimed by some to be associated with the slightly larger caliber (27G) needles.

The third reason to use and become proficient with EMG guided injections is for professional growth. Non-EMG injectors in

general confine their treatment and teaching activities to dystonia of the neck and face (also excluding spasmodic dysphonia and jaw dystonia). They are not prepared for even the occasional complex cervical dystonia case where EMG would clearly be useful.

While EMG guided injections are rarely done in the face and are optional in the neck, they are a vital tool in treatment of the limbs. Except for a small number of large and superficial muscles, accurate muscle identification with EMG is needed for both limb

dystonia and spasticity.^{4,5,6} Patients with limited voluntary muscle activation may also require direct electrical stimulation via the injection/EMG needle. Expertise in EMG guided injection allows a clinician to serve patients with motor disorders that range widely in complexity and location. This practice building skill in the long

run is a more important financial issue than the small fractional added cost (which may or may not be reimbursed) of EMG guided toxin injections.

“Expertise in EMG guided injection allows a clinician to serve patients with motor disorders that range widely in complexity and location.”

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Impulse Control Disorders in Parkinson's Disease Workshop

The 2007 Impulse Control Disorders Workshop convened in Toronto, Canada to present and discuss features of this disorder, discuss what may be the causes of these behaviors, and address how to treat patients who have this problem. The two-day gathering on July 12-13 brought together over 90 neurologists, psychiatrists and researchers to discuss the latest developments in the field of Impulse Control Disorders (ICD) in Parkinson's disease. Examples of ICDs include disruptive behaviors such as gambling, compulsive shopping, or hypersexuality that rarely occur in people with Parkinson's disease.

"This was a fantastic meeting. The interaction of specialists in addiction, brain imaging, bench scientists, pharmacologists and neurologists stimulated many new ideas for discussion and research," said Workshop Director Mark Stacy. "Prior to this meeting, no one had really proposed criteria for diagnosis of the syndrome, or the importance of awareness in the hierarchy of behavioral or dopaminergic therapy addictions."



Participants of the Impulse Control Disorders Workshop in Toronto, Canada

Day 1 – Thursday, July 12

Day 1 began with a Keynote lecture delivered by Andrew Lees, reviewing the history and evolution of Hedonistic Homeostatic Dysregulation, Dopamine Dysregulation Syndrome, and Impulse Control Disorders in PD patients.

Three Platform Sessions on Day 1 included:

Dopaminergic Activity and Addiction

Dopaminergic Pathways and Animal Models of Addiction:

Michela Marinelli

Receptor Pharmacology: Susan Fox

Role of DA in Addiction/Behavior: Antonio Strafella

Clinical Manifestations of ICD

Epidemiology of ICD: Andrew Evans

Genetic Factors in ICD and Addiction Disorders: James L. Kennedy

Compulsive Behaviors: Daniel Weintraub and Hubert H. Fernandez

Reward Behaviors: Valerie Voon and Oksana Suchowersky

Addiction and Impulse Control Disorders

Clinical Parallels with Addiction: Jenny Bearn

Neuropsychiatric Considerations of ICDs: Anthony David

Clinical Scales in ICD Assessment: Daniel Weintraub

Other Assessment Tools in ICD: Marc Potenza

The day ended with a wine and cheese poster session, where Junior Investigators and researchers mingled with participants and presented their findings.

"The posters were extremely interesting and expanded the debate of the topic to a number of assessment tools and in regards to the role of DBS for the treatment of this condition," reported Dr. Stacy.

Day 2 – Friday, July 13

Day 2 included three additional Platform Sessions on Imaging, Clinical Pharmacology and Physiology and Assessment, Diagnosis and Management of ICDs:

Imaging

PET: David Brooks

fMRI: Marc Potenza

Clinical Pharmacology and Physiology

Levodopa: Peter LeWitt

Dopamine Agonists: Charles Adler

Assessment, Diagnosis and Management of ICDs

Criteria for Disorder: Mark Stacy

Treatment Approaches: Wendy Galpern

Deep Brain Stimulation: Jens Volkmann and Michael Samuel

Future Directions: Anthony Lang

"Future studies will need to establish more definitively whether Impulse Control Disorders such as pathological gambling induced by dopaminergic therapy in Parkinson's disease, are phenomenologically and pathogenetically the same as these problems seen in the general population without Parkinson's disease," reported MDS President Dr. Anthony Lang. "[There] is a clear need for the development of evaluation tools to screen for the presence of the symptoms as well as to rate their severity."

The Workshop Planning Committee is in the throes of writing a manuscript of the proceedings, which will eventually be submitted for publication in *Movement Disorders*.



Participants discuss their posters with faculty during the wine and cheese poster session



The Movement Disorder Society

The Many Faces of Dystonia:

A Frequently Misdiagnosed Disorder

A PRACTICAL and VIDEO-INTERACTIVE COURSE

Workshop Description

This course will focus on increasing awareness of dystonia in the general neurology community by addressing topics related to the diagnosis and misdiagnosis of dystonia. Using a video-case based template, the course will highlight focal and generalized dystonia, demonstrating the spectrum of disease from mild to severe and the appropriate work-up. Treatment strategies will be summarized, but not highlighted.

Learning Objectives

At the conclusion of this workshop, participants should be able to:

- List the most frequent forms of dystonia;
- List the diagnostic criteria for dystonia;
- Describe common presenting symptoms of dystonia;
- Discuss the differential diagnosis of dystonia;
- Describe common pitfalls in diagnosing dystonia;
- Outline treatment strategies for dystonia.

Workshop Directors

Susan B. Bressman, MD
NEW YORK, NEW YORK, USA

Cynthia L. Comella, MD
CHICAGO, ILLINOIS, USA

Mark F. Lew, MD
LOS ANGELES, CALIFORNIA, USA

A. Peter Moore, MD, FRCP
LIVERPOOL, UNITED KINGDOM

March 7, 2008

Marriott Boston Copley
Boston, MA, USA



To obtain registration details and further information, please visit the MDS Web site at www.movementdisorders.org, or contact the Education Team, by e-mail at info@movementdisorders.org or via telephone at +1 414-276-2145.

Supported in part by an educational grant from  **ALLERGAN®**

Visit the MDS Web site at:
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for upcoming meetings,
education, and the latest
international news in
Movement Disorders.

**Watch for a new
Web site coming soon!**



Continued from page 3

have regular access to educational programs in Movement Disorders. Application forms are available on the MDS Web site and are accepted throughout the year.

MDS collaborates with related organizations

We believe that as our specialty continues to grow, a continuous dialogue with other organizations will become increasingly important to bring clinicians, researchers and policy makers together for the exchange of the latest developments in the diagnosis and treatment of Movement Disorders. It is with this goal in mind that we invite other neurological organizations and groups specializing in Movement Disorders to become an Affiliate Member of The *Movement Disorder Society*. If you are active in another organization, consider encouraging that organization to become an Affiliate Member of MDS. The organization would be entitled to:

- Announce MDS Affiliated Member status on the organization's letterhead and Web site.
- Receive "fast track" consideration of applications for sponsorship, support or endorsement of your organization's scientific meetings.
- Receive MDS mailings on future International Congresses and educational programs, as well as the official newsletter of the MDS, *Moving Along*.
- Reserved meeting space at MDS Congresses

Our Liaison Committee has been given the mandate of establishing ties with country Movement Disorders groups and encouraging Affiliated Membership.


MDS recognition through involvement

As a member of MDS, participation in committees and sections offers you the opportunity for recognition and the opportunity to hone your leadership skills. The MDS Committees and Sections provide a forum for members to develop specialized educational programs, discuss research and clinical matters and serve as a resource for MDS by providing expertise in their respective area of interest. Please consider getting involved in MDS activities by responding to the e-mail we will send next month. This e-mail will ask members to express their interest in participating in the Society.

These MDS initiatives that bring together individuals and organizations from around the world will ensure that our specialty is guided by experts committed to the betterment of the Society and the medical specialty of Movement Disorders. Your participation is vital for the effective and innovative leadership of the specialty. I hope you will join me, and the many committee and section leaders, in contributing to the ongoing development and achievement of MDS and the specialty of Movement Disorders.



Anthony E. Lang, MD, FRCPC
MDS President 2007-2009



The Movement Disorder Society

VISITING PROFESSOR PROGRAM

The aim of MDS Visiting Professorships is to educate physicians and healthcare professionals in underrepresented regions of the world about Movement Disorders. Since its first offering in 2003, the Society's Education Committee has developed Visiting Professor Programs in South Africa, Romania, India, Tunisia, China and Chile.

The MDS Visiting Professors have implemented programs at local institutions utilizing:

- Didactic lectures
- Clinical case presentations
- Interactive seminars
- Practical workshops

If you are aware of, or currently located in, a region that could benefit from this program, please contact the MDS International Secretariat in order to submit an application.

Please visit www.movementdisorders.org or e-mail chenderson@movementdisorders.org for more information.

Announcements

Join the International RLS Study Group

We are inviting individuals with a special interest in Movement Disorders to join the International Restless Legs Syndrome Study Group (IRLSSG).

The IRLSSG is responsible for:

- Developing the criteria for the essential clinical features of Restless Legs Syndrome (RLS).
- Developing and validating a severity rating scale for RLS.
- Defining the clinical criteria for measuring Periodic Limb Movements in Sleep.

IRLSSG members are currently carrying out joint linkage studies in an attempt to find the gene(s) responsible for RLS symptoms. The IRLSSG has advised pharmaceutical companies on the experimental design of therapeutic trials, and IRLSSG members have participated in several large industry-sponsored RLS treatment trials.

There are two types of membership:

1. VOTING MEMBERS

- a) Individuals with a doctoral degree or equivalent who are currently working in areas related to RLS research or clinical practice.
- b) Students or para-professionals (including study coordinators and technicians) who provide evidence of significant contributions to the field within the past five years (such as working with an RLS support group) or one or more publications in the field.

2. NON-VOTING MEMBERS

Students or para-professionals who have not published or made significant contributions to the field may apply for non-voting membership.

Excluded from membership are individuals working full time for for-profit organizations with potential conflicts of interest, such as pharmaceutical companies.

Membership is free. To apply, please submit a letter of intent and attached curriculum vitae to Dr. Marco Zucconi at zucconi.marco@hsr.it.

Progressive Supranuclear Palsy Study

The University of Louisville Movement Disorder Program is seeking patients with progressive supranuclear palsy for a multi-center study to identify environmental and genetic risk factors associated with the disease. Subjects will be provided with a physical and neuropsychological examination, will be asked to provide a blood sample for DNA testing and will take part in a detailed phone interview. This study is sponsored by the National Institutes of Health (NIH). Subjects can be seen at eight medical centers throughout the United States. For more information please call 1-866- PSP- 0448 (1-866-777-0448).

MDS Accepting Applications for the 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 MDS and do not have regular access to educational programs in Movement Disorders. For more information or applications for this program, please click on the following link, www.movementdisorders.org/education/visitingprofessor.shtml or contact Crystal Henderson, MDS Education Program Manager, at +1 414-276-2145.

Job Openings

Neurologist at The NeuroHealth Parkinson's Disease and Movement Disorder Center

The NeuroHealth Parkinson's Disease (PD) and Movement Disorder Center is recruiting for a fellowship trained and board-certified or certification-eligible neurologist to work with Joseph H. Friedman, MD. The full-time position offers the best of both worlds—academic medicine and hands-on patient care—in an independent private-practice setting. The position offers advanced clinical care experience, such as administering botulinum therapy for dystonia patients, Deep Brain Stimulation and opportunities to conduct clinical research sponsored by the Parkinson's Disease and Huntington's Disease Study Groups, the National Institutes of Health, pharmaceutical companies or of your own design. We are involved in teaching Brown neurology residents, Geriatric internal medicine fellows and medical students. Applicants should submit a letter of interest and CV to Joseph H. Friedman, MD, Director of the NeuroHealth Parkinson's Disease & Movement Disorder Center, 227 Centerville Road, Warwick, Rhode Island 02886 or to joseph_friedman@brown.edu.

Movement Disorder Specialist at Sultan Qaboos University Hospital

A position is available for an adult Movement Disorder specialist at Sultan Qaboos University Hospital in Oman. Those who are interested should contact Abdullah Al-Asmi, MD, FRCPC by e-mail at alasm@squ.edu.om.

Neurological Director of the DBS / Functional Surgery Program

Swedish Medical Center in collaboration with The Colorado Neurological Institute (CNI) is committed to the addition of a Neurologist with training and interest in Movement Disorders. A Directorship position may be available for interested candidates.

You can look forward to:

- Generous salary guarantee and comprehensive benefit package
- Paid relocation
- \$84 Million reconstruction and renovation project at Hospital
- CNI's educational outreach programs and rehabilitation services

Continued from page 13...

- Worldwide leaders, including neurosurgeons and interventional neuroradiologists, performing complex brain surgeries and treating arterial venous malformations
- The hospital's active engagement in clinical trials

CNI is comprised of integrated, multi-disciplinary teams of neuroscientists provide comprehensive care for adults with neurological disorders and adults and children with hearing loss and ear disease. This is an opportunity to be affiliated with the Colorado Neurological Institute with open possibilities for program participation and development.

Swedish Medical Center is an acute care hospital with 368 licensed beds, a Level I Trauma Center, serves as the region's referral center

for neurotrauma and is a recognized leader in the treatment of stroke. Swedish's Centers of Excellence include: Adult and Pediatric Trauma Services, Neurosciences, Advanced Radiology Capabilities, Cancer Treatment Services, Cardiology Services and Women's & Children's Services. Swedish is located in the south Denver among Denver's best neighborhoods and school districts. Swedish is the 2006 Consumer Choice Award Winner as the preferred hospital in Denver.

www.denver.org
www.thecni.org
www.swedishhospital.com

UPCOMING MEETINGS

September 15-20, 2007

American Association of Neurological Surgeons Annual Meeting. San Diego, CA, USA.

Contact: American Association of Neurological Surgeons, 5550 Meadowbrook Drive, Rolling Meadows, IL 60088 USA; TEL: +1 847-378-0500 or +1 888-566-2267; FAX: +1 847-378-0600; E-mail: info@aans.org; Web site: www.neurosurgery.org/aans/meetings

September 23-25, 2007

LIMPE Seminar: Experimental Models in Parkinson's disease. Porto Conte Ricerche Congress Center, Alghero-Sardinia, Italy. Contact: Lega Italiana Malattia di Parkinson (LIMPE); Web site: www.limpeseminars.org

September 26-29, 2007

Mitochondria & Oxidative Stress in Neurodegenerative Disorders. The New York Academy of Sciences Conference Center, 7 World Trade Center, 250 Greenwich Street, 40th Floor, New York, NY, USA. Contact: Kara-Leigh Dockery; TEL: (212) 298-8624; FAX: (212) 298-3627; E-mail: kdockery@nyas.org; Web site: www.nyas.org/oxiconf

September 29, 2007

American Academy of Neurology Dystonia/Spasticity Workshop. Hilton San Diego Mission Valley, San Diego, CA, USA. Contact: Lori Strachota, American Academy of Neurology, 1080 Montreal Avenue, St. Paul, MN, USA 55116; TEL: +1-651-695-2706; E-mail: lstrachota@aan.com; Web site: www.aan.com/dystonia07

October 7, 2007

21st Annual Symposium on the Etiology, Pathogenesis and Treatment of Parkinson's Disease and Other Movement Disorders. Marriott Wardman Park Hotel, Washington D.C., USA. Contact: Roseanna Battista; TEL: +1 585-275-1642; E-mail: Roseanna.Battista@ctcc.rochester.edu; Web site: www.parkinson-study-group.org

October 10-13, 2007

Second Joint Meeting of the European Federation of Autonomic Societies & American Autonomic Society Meeting. Palais Ferstl, Vienna, Austria. Contact: Bianca Theuer, Vienna Medical Academy, Alser Str. 4, Vienna 1090, Austria; TEL: 43-1-4051383-12; FAX: 43-1-4078274; E-mail: efas2007@efasweb.com; Web site: www.efasweb.com/2007

***October 11-12, 2007**

Parkinson's Disease Foundation's 50th Anniversary Educational Symposium: Frontiers of Science and Clinical Advances in Quality of Life. South Street Seaport Market area at Bridgewater, 11 Fulton Street, New York, NY 10038. Contact: Elizabeth Pollard; TEL: +1-212-923-4700; FAX: +1-212-923-4778; E-mail: epollard@pdf.org; Web site: www.pdf.org/50th/

***October 11-12, 2007**

Abnormal Plasticity in Basal Ganglia: From Dyskinesia to Deviant Behavior. Quebec City, Quebec, Canada. Contact: Emmanuelle Pourcher, Quebec Memory and Motor Skills Disorder Clinic, 65 Sainte-Anne, 3rd Floor, Quebec City, Quebec, Canada; TEL: +418-692-2227; FAX: +418-692-3338; E-mail: psa@rig.qc.ca

October 12-13, 2007

4th International Meeting of the Brain Stem Society. Johannes Gutenberg University, Mainz, Germany. Contact: PD Dr. Juergen Marx, BSS Meeting 2007, Department of Neurology, University of Mainz, Lagenbeckstr. 1, Mainz, Germany; TEL: +49-6131-177194; FAX: +49-6131-175697; E-mail: marx@neurologie.klinik.uni-mainz.de; Web site: www.klinik.uni-mainz.de/Neurologie/aktuelles/VorprogrammBrainStemMeeting.pdf

October 17-20, 2007

American Association of Neuromuscular & Electrodiagnostic Medicine (AANEM) Annual Meeting. Phoenix, AZ, USA. Contact: Shelly Hansen, AANEM, 421 1st Avenue, SW Ste 300E, Rochester, MN 55902 USA; TEL: +1 507-288-0100; FAX: +1 507-288-1225; E-mail: aanem@aanem.org; Web site: www.aanem.org

***October 20-22, 2007**

1st Asian and Oceanian Parkinson's Disease and Movement Disorders Congress (AOPMC). Singapore. Contact: Congress Secretariat; E-mail: nni_secretariat@nni.com.sg; Web site: www.nni.com.sg

***November 2, 2007**

Dopamine Transporter Imaging in Neurological Practice. University of Marburg, Germany. Contact: Crystal Henderson, Program Manager, The Movement Disorder Society – European Section, 555 East Wells Street, Suite 1100, Milwaukee, WI 53220 USA; TEL: +1 414-276-2145; FAX: +1 414-276-3349; E-mail: chenderson@movementdisorders.org; Web site: www.movementdisorders.org

November 2, 2007

American Academy of Neurology Dystonia/ Spactitivity Workshop (in conjunction with the Fall Conference). Caesars Palace, Las Vegas, NV, USA. Contact: Lori Strachota, American Academy of Neurology, 1080 Montreal Avenue, St. Paul, MN, USA 55116; TEL: +1-800-879-1960; E-mail: memberservices@aan.com; Web site: www.aan.com/go/education/conferences/fall

November 2-4, 2007

American Academy of Neurology Fall Conference. Caesars Palace, Las Vegas, NV, USA. Contact: Lori Strachota, American Academy of Neurology, 1080 Montreal Avenue, St. Paul, MN, USA 55116; TEL: +1-651-695-2706; E-mail: memberservices@aan.com; Web site: www.aan.com/go/education/conferences/fall

November 8, 2007

Annual PSP Research Symposium. Embassy Suites Hotel, San Diego, CA, USA. Contact: Nancy Brittingham, CurePSP, 11350 McCormick Road, Suite 906, Hunt Valley, MD, 21030, USA; TEL: +1 800-457-4777; FAX: +1 410-785-7009; E-mail: brittingham@curepsp.org; Web site: www.curepsp.org

November 8-10, 2007

Mayo Clinic 2007 Parkinson's Disease & Other Movement Disorders for the Practitioner. Grand Hyatt Kauai Resort & Spa, Kauai, Hawaii, USA. Contact: Robbie Slater, Mayo Clinic, 13400 E. Shea Blvd., Scottsdale, AZ, 85268; TEL: +1-480-301-4580; FAX: +1-480-301-8323; E-mail: mcs.cme@mayo.edu; Web site: www.mayo.edu/cme

November 8-11, 2007

5th International Congress on Vascular Dementia. Budapest, Hungary. Contact: Natalie Shabi, Kenes International, 17 Rue de Cendrier, P.O. Box 1726, CH-1211, Geneva 1, Switzerland; TEL: +1 41-22-908-0488; FAX: +1 41-22-732-2850; E-mail: calendar@kenes.com; Web site: www.kenes.com/vascular/

***November 30, 2007**

Dopamine Transporter Imaging in Neurological Practice. University of Naples Federico, Policlinico, Italy. Contact: Crystal Henderson, Program Manager, The Movement Disorder Society – European Section, 555 East Wells Street, Suite 1100, Milwaukee, WI 53220 USA; TEL: +1 414-276-2145; FAX: +1 414-276-3349; E-mail: chenderson@movementdisorders.org; Web site: www.movementdisorders.org

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Attention MDS Members!

The *Movement* Disorder Society is pleased to inform you that the following slide sets are currently available by logging into the 'MEMBERS ONLY' section of the MDS Web site:

DYSTONIA

MYOCLONUS

RESTLESS LEG SYNDROME

COMING SOON!!

Slide sets for the diagnosis of Ataxia, Chorea and Parkinsonism

Please note that you must be a MDS Member to view the aforementioned slide sets. If you are not a member, please visit www.movementdisorders.org for membership information.

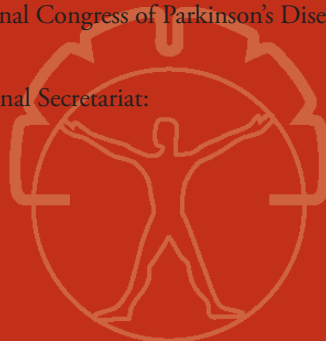
New Benefits for Waived Dues Members!

The *Movement* Disorder Society (MDS) is pleased to announce two new benefits to all current and future Waived Dues Members:

- Access to the online journal, *Movement Disorders*
- Waived registration fees for the annual International Congress of Parkinson's Disease and Movement Disorders

For more information, please contact the International Secretariat:

The *Movement* Disorder Society
 555 East Wells Street, Suite 1100
 Milwaukee, WI 53202 USA
 Phone: +1 414-276-2145
 Fax: +1 414-276-3349
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The *Movement* Disorder Society's

12th International Congress of Parkinson's Disease and Movement Disorders

CHICAGO

Chicago, IL, USA | June 22-26, 2008



SAVE THE DATE