



# THE TRANSMITTER

September 2015

## Article Review

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### **Cholinesterase inhibitors for Parkinson's disease: A systematic review and meta-analysis**

Although Parkinson disease traditionally has been considered a disease of dopamine systems, there is evidence of cholinergic dysfunction linked to cognitive and gait decline. Cholinergic receptor antagonists such as trihexyphenidyl and benztropine are useful for tremor in some patients. On the other hand, cholinesterase inhibitors may be useful in some patients for treatment of cognitive dysfunction, but carry the potential risk of exacerbating tremor or other motor features of PD. These authors carried out a meta analysis of cholinesterase treatment in PD by screening more than 400 publications and eventually narrowing the analysis to 4 double blind randomized placebo controlled clinical trials (3 of donepezil and one of rivastigmine; none were available for galantamine). Cholinesterase inhibitors slowed cognitive decline as assessed by MMSE and Alzheimer Disease Assessment Scale-cognitive subscale but did not worsen falls. However, cholinesterase treatment did worsen tremor and increase adverse drug reactions. This meta analysis, which excluded patients with dementia with Lewy Bodies and did not include smaller studies, agrees with others previously reported with regard to efficacy of cholinesterase for cognitive dysfunction, albeit at a risk of making tremor worse.

G. Pagano, G. Rengo, G. Pasqualetti, et al. (2015): *J Neurol Neurosurg Psychiatry* 86: 767-773. Published online Sept 15, 2015. <http://www.ncbi.nlm.nih.gov.ezproxyhost.library.tmc.edu/pubmed/25224676>

### **Identification of genetic factors that modify clinical onset of Huntington's disease**

The longer the number of CAG repeats in the Huntington's disease locus, the earlier the onset of disease - yet for any given repeat length, age of onset may vary widely. Using a cohort of more than 4000 individuals bearing repeat lengths between 40 and 55, this consortium used genome-wide association analysis to identify genetic modifiers of age of onset. The size of the effect turned out to be quite robust- a matter of years. A locus on chromosome 15 had two different effects, either hastening onset by 6.1 or delaying it by 1.4 years. A chromosome 8 locus accelerated disease onset by 1.6 years. In neither the chromosome 15 nor 8 locus, however, were the exact genetic variations that cause the age of onset effect identified. A more targeted effort analyzed pathways underlying modifier effects and found enriched numbers of genes that play a role in DNA repair, including a gene called MLH1 on chromosome 3. This landmark paper opens the way toward identifying genetic modifiers that may in future provide therapeutic targets to modify age of onset in HD; these could have important effects on disease burden even in the absence of a cure per se.

Genetic Modifiers of Huntington's Disease Consortium (2015): *Cell* 182: 516-517.  
[http://www.cell.com/cell/abstract/S0092-8674\(15\)00840-5](http://www.cell.com/cell/abstract/S0092-8674(15)00840-5)

### **Direct visualization of alpha-synuclein oligomers reveals previously undetected pathology in Parkinson's disease brain**

The Lewy body is a pathological hallmark of Parkinson disease and is constituted of intraneuronal proteinaceous material that includes alpha-synuclein. Most experts do not consider Lewy bodies to be the most toxic form of alpha-synuclein; rather, smaller conformers known as oligomers are probably the true toxic entity. Such oligomers can be well characterized using biochemical techniques, but until now our ability to localize them accurately in tissue has been limited. These investigators used a technique called a proximity ligation assay to localize oligomers in Parkinson disease brain, along with cell cultures and biochemical experiments to verify that the technique is indeed identifying oligomers. The assay labelled oligomer assemblies in neuronal cell bodies that appeared to be normal, rather than those with pallor or Lewy bodies, consistent with the idea that oligomers are an early pathological event more proximal to cell injury in Parkinson disease than the Lewy body. Lewy bodies themselves were very rarely stained with the ligation assay. This technique provides a means of testing the true pathogenic role of alpha-synuclein oligomers in brains of patients and animal models, and it may uncover surprising and previously unknown early pathogenic aggregates in target tissues, including nonmotor systems. *R.F. Roberts, R. Wade-Martins, and J. Alegre-Abarrategui. (2015): Brain 13: 676-685.*  
<http://www.ncbi.nlm.nih.gov/pubmed/25732184>

## **Committee Activities**

### **Clinical Care Committee**

- **Rotation of Committee Chair:** Leadership for the clinical care committee rotates amongst the PADRECCs. The Houston PADRECC leads the committee for September/October. Committee meets via conference call the first Tuesday of the month at 12pm (EST)
- **Standardize and Optimize Clinical Care:** Continues to discuss a variety of clinical issues to improve patient care and outcomes . The committee continues to provide clinical support to the consortium network, and works on measures to standardize clinical care across the PADRECC network.

Recent agenda items have included new and ongoing discussion on:

- New treatment options for Parkinson’s Disease including DUOPA™ (carbidopa and levodopa) enteral suspension delivered directly into the small intestine for the treatment of motor fluctuations for people with advanced Parkinson's disease. Discussion focused on development of standardized protocol for this therapy across the PADRECC network, logistical issues, education and support aspects.
  - Current practice regarding the use of various Neurotoxins across the PADRECC network with the objective to improve this specialized clinical practice and develop neurotoxin selection criteria for various conditions in the Veteran population.
  - Practical aspects regarding the use of DAT scans; Applications and pitfalls, including the issue of drug interference
  - Palliative Care: Review of palliative care resources and practices in the PADRECCs
  - Veteran’s Choice Program, optimization of care across the PADRECC network.
- **PADRECC Transmitter:** PADRECC clinicians provide reviews of recent movement disorder publications that are included in the PADRECC Transmitter

## Education Committee

- **PADRECC/EES Movement Disorder Series:** The 1<sup>st</sup> audioconference for FY 2016 is scheduled for **November 12, 2015-“Drugs and Movement Disorders: Truths, Myths and More,”** by Jessica Lehoist, DO-Richmond PADRECC. The audioconferences are archived on the National website [www.parkinsons.va.gov](http://www.parkinsons.va.gov) under the Movement Disorder Series tab. Please see the **Dates to Remember** section below for a listing of upcoming FY 16 audio conferences.
- **National Newsletter:** The **2015 VA Parkinson Report** is being distributed electronically.
- **Patient Education Video Project:** The My Parkinson’s Story video series from FY 11 & 12 are available for viewing on the National PADRECC & VA Consortium Website: <http://www.parkinsons.va.gov/patients.asp> and on You Tube.
- **“Mood Disorders in PD: What’s New”:** This enduring material project was done in collaboration with EES and is an on-line TMS self-study program that offers CME credit for a 3 year period. This program provides VHA healthcare professionals with a broadened medical awareness of Mood Disorders in PD. The program is **NOW** available on TMS:  
  
[https://www.tms.va.gov/learning/user/deeplink\\_redirect.jsp?linkId=ITEM\\_DETAILS&componentID=14771&componentTypeID=VA&revisionDate=1343926380000](https://www.tms.va.gov/learning/user/deeplink_redirect.jsp?linkId=ITEM_DETAILS&componentID=14771&componentTypeID=VA&revisionDate=1343926380000)
- **PADRECC Transmitter:** The committee continues to assemble and distribute this e-newsletter every other month.

## Houston PADRECC Service Area Update

### Houston PADRECC

**Director: Dr. Aliya Sarwar**

### New Consortium Center:

Robert J Dole VAMC, Wichita, KS

Consortium Director: Lynn Chouhfeh, MD

New Consortium Members added in FY 14-15 includes:

Lipika Nayak, Neurologist -Kansas City VAMC

Divya Singhal, Oklahoma City VAMC

James Torrisi, Neurologist at the Biloxi VAMC

- **Current Consortium Activities:**

Bi-monthly Consortium call: Discussions include practical support for DBS programming and management strategies to optimize care for complicated PD and other MD patients.

Our Consortium Network Directors and their staff receive special orientation, materials, and other support for participation in the Houston Consortium Network.

Enduring educational material related to PD management and safety developed in collaboration with other PADRECCs, continued to be distributed and used at our various consortium sites as an educational resource for the patients, their care providers and healthcare professionals.

- **Future Plans:**

A research conference call with all consortium directors is being planned in addition to our regular clinical/educational call.

A yearly mini-educational conference using AV technology is being planned with all consortium sites

- **Clinical News**

The Houston PADRECC continues to provide state of the art medical and surgical services to Veterans with Parkinson's disease and related movement disorders who reside in the Southcentral and Midwestern United States. The center performs DBS surgeries using both conventional and frameless techniques and has launched an initiative with the Departments of Neurosurgery and Radiology to make the DBS surgery under sedation available to our patients in the coming years.

- **Education News**

Houston PADRECC patient and medical professionals based educational program includes:

- **Vocational Rehabilitation Program:** Our center has created an alliance with the Department of Veterans Benefits' Vocational Rehabilitation Program for qualified Veterans to engage in "On the Job Training" (Non-Paid Work Experience). From April to September 2015, Houston PADRECC has trained and benefited from the excellent volunteer services of Ms. Sheila Cruz (Certified Medical Assistant) and Ms. Demetrius Moore (Certified Nurse Assistant) to support our clinical and educational programs.
- **Patient directed clinic based education:** Key part of specialty patient care. Provided 4 clinic days a week, involves 1:1 education in the clinics and provision of printed educational materials
- **Monthly patient and caregiver educational support group:** Offered on the first Thursday of each month. Informal educational sessions with the patients and care providers lead by a RN or MD.
- **Patient and caregiver educational forum:** a quarterly patient directed lecture series by an expert on Parkinson's disease followed by a Q & A session with PADRECC physicians.
- **Annual Educational Conference:**  
The Houston PADRECC in collaboration with Houston Area Parkinson's Society (HAPS) organizes an all-day educational program that includes various lecture and discussion sessions by movement disorders experts for the PD patients and their care providers.

**Recent Annual symposiums:**

The 5th annual CAREGIVER CONFERENCE: *What now? What next?* sponsored by Houston PADRECC and HAPS was held at the United Way Resource Center on December 6, 2014.

PADRECC staff had an information table at the Houston Area Parkinson's Society's 26th Annual Educational Symposium on Saturday, May 2, 2015. As well as the Partners in Parkinson's Houston symposium, held on September 12, 2015 at the George R. Brown Convention Center.

- **Medical Professionals based educational initiatives:** have included: monthly journal club, monthly case conference, monthly live lecture series and guest/ audio lecture series.
- **Medical trainees Program:** Senior neurology residents from Baylor College of Medicine do their Movement Disorders rotation at the Houston PADRECC. In addition, the center maintains a robust post-doc research trainee program, where post-graduate MD physicians are able to utilize a without compensation training option to train with the center for 6-24 months.
- **Honors and Awards:**

In recognition of her educational endeavors, Dr. Aliya Sarwar was awarded the Fulbright and Jaworski L.L.P. Faculty Excellence Award in Educational Leadership at the Baylor College of Medicine in December 2014 which was preceded by the Fulbright & Jaworski LLP Faculty Excellence Award for Teaching and Evaluation in April 2014.

She was also inducted into the Baylor College of Medicine's Academy of Distinguished Educators which recognizes the educational scholarship of faculty members involved in all of the educational missions of Baylor College of Medicine.
- **Research News**
  - **Current Research Studies:**
    - CIRCADIAN RHYTHM AND SLEEP IN PD
    - ANALYSIS OF HUMAN BASAL GANGLIA ELECTROPHYSIOLOGICAL RECORDINGS AND TARGETED STIMULATION FOR OPTIMIZATION OF DEEP BRAIN STIMULATION
    - LONGITUDINAL STUDY OF CHRONIC TBI IN OEF/OIF/OND VETERANS/SERVICE
    - EXERCISE AND PD
    - EXERCISE AND TREMOR
    - VITAMIN D DEFICIENCY AND PD
    - PD AND MELANOMA
    - GEOGRAPHIC DISTRIBUTION OF PD PATIENTS WITHIN THE VHA

## **Dates to Remember**

**October 6-8, 2015**

**World Parkinson Congress Scientific Update 2015**

Online Meeting-Live Webcast

Registration opens in August

<http://www.worldpdcoalition.org/?page=2015Webcast>

**November 12<sup>th</sup>, 2015**

**EES/PADRECC Movement Disorder Series**

Topic: Drugs in Movement Disorders: Truths, Myths and More

<http://www.parkinsons.va.gov/>

**January 14<sup>th</sup>, 2016**

**EES/PADRECC Movement Disorder Series**

Topic: Nutrition and PD

<http://www.parkinsons.va.gov/>

**February 20-March 2, 2016**

**2016 PAN Forum**

Washington, DC

<http://parkinsonsaction.org/events/forum/>

**March 10<sup>th</sup>, 2016**

**EES/PADRECC Movement Disorders Series**

Topic: Dupoa

<http://www.parkinsons.va.gov/>

**April 15-21, 2016**

**2016 American Academy of Neurology (AAN) Meeting**

Vancouver, Canada

[www.ann.com](http://www.ann.com)

**May 12<sup>th</sup>, 2016**

**EES/PADRECC Movement Disorders Series**

Topic: Complementary and Alternative Medicine

<http://www.parkinsons.va.gov/>

**June 19-23, 2016**

**2016 Movement Disorder Society International Congress**

Berlin, Germany

[www.mdsccongress2016.org](http://www.mdsccongress2016.org)

**September 8<sup>th</sup>, 2016**

**EES/PADRECC Movement Disorders Series**

Topic: Palliative Care and PD

<http://www.parkinsons.va.gov/>

**September 20-23, 2016**

**4<sup>th</sup> World Parkinson Congress**

Portland, Oregon

<http://www.wpc2016.org/>

