



THE TRANSMITTER

September 2019

Article Reviews

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Impulse control disorders in Parkinson's disease and RBD: A longitudinal study of severity.

Impulse control behaviors (ICBs) in PD are common in early stages and may worsen over time. ICBs comprise a range of behaviors linked by their reward based, repetitive natures. Impulse control disorders (ICDs) are behavior patterns that influence social or occupational function. Prevalence estimates of PD-ICBs vary between 14% and 40%. Dopaminergic medications, particularly agonists, along with demographic and disease specific factors are risk factors, but the role of RBD as a risk factor for developing PD-ICD is unclear. This study was designed to determine distribution and severity of PD-ICBs, expected prevalence of PD-ICBs, and which clinical factors are associated with PD-ICBs. Subjects with early PD, RBD, and controls were recruited as per study protocol. All participants completed the Questionnaire for Impulse Control Disorders In PD - Short Form (QUIP-S). The participants were interviewed at 18 and 36 months after the initial interview. 921 cases were screened initially, 768 at 18 months, and 531 cases at 36 months. 21-25% of the participants screened positive for ICBs at each interview. Interview of ICB screen positive participants showed that 10% met formal criteria for ICDs. The prevalence of PD-ICB was 19.1%. On follow up interviews, 24% of subsyndromal ICD had developed full symptoms of ICD. PD-ICD was associated with dopamine agonist use, motor complications, and apathy. PD-RBD was not associated with increased ICD risk. ICD prevalence did not differ between the RBD (1%) and control (0.7%) group.

Neurology 2019. Aug 13; 93 (7): e675-e687.

A biomarker for disease severity and progression in Parkinson disease: A prospective follow-up study.

There is a need for a biomarker that can predict PD progression and be used as an objective measure to assess therapeutic response. Neurofilament light chain (NfL) is a protein highly expressed in large fiber myelinated axons and is an important byproduct of neurodegenerative processes. Previous studies have shown that plasma NfL levels are elevated in several chronic neurodegenerative disorders, and there is close correlation between plasma and CSF NfL levels. The authors describe a longitudinal followup study to examine (1) association of plasma NfL with motor and cognitive progression in PD, and (2) whether plasma NfL can differentiate multisystem atrophy (MSA) from PD. 178 participants were recruited: 116 with PD, 22 with MSA, and 40 healthy controls. Patients with PD were evaluated with the Unified Parkinson's disease Rating Scale (UPDRS), Hoehn and Yahr staging, and the Mini-Mental State Examination (MMSE). Evaluations were done at baseline and at a mean followup of 3 years. Plasma NfL was higher in MSA than PD and age-matched controls, as well as in PD as compared to controls. NfL increased as Hoehn and Yahr stage and UPDRS part III scores increased. Similar correlations were noted with cognitive decline. After a mean follow-up period of 3.4 years, persons with PD and baseline NfL levels >21.84 pg/mL were at higher risk of motor symptoms progression than those with NfL levels <21.84. Those with baseline NfL levels >18.34 pg/mL were at higher risk of cognition decline as compared to <18.34. Thus, plasma NfL levels distinguished patients with PD and those with MSA and reflected disease severity in terms of both motor and cognitive functions in PD; large longitudinal studies are needed to validate these findings.

Genomewide association study of Parkinson's disease clinical biomarkers in 12 longitudinal patients' cohorts.

In recent years, several genomewide association studies have identified variants associated with PD risk, but factors contributing to progression and phenotype have been less well studied. The authors performed a meta-analysis that examined 22,307 follow-up visits from 4093 patients across 12 cohorts. Phenotyping differed somewhat among the cohorts; the authors chose to focus on Hoehn and Yahr, total and subscores of UPDRS (original or MDS), Mini Mental Status Exam, Montreal Cognitive Assessment, and Schwab and England Activities of Daily Living Scale. Genetic data were derived using gene chips or whole genome sequencing. Two variants within the intron variant within *SLC44A1*, which encodes choline transporter-like protein 1, were associated with reaching Hoehn and Yahr stage 3 or higher. A variant near the alpha 2A adrenergic receptor locus correlated with lower baseline insomnia prevalence. Among the targeted data from the gene chips, 9 known variants were associated with more severe motor/cognitive symptoms. In agreement with other studies, particular *GBA* (glucocerebrosidase A) variants were correlated with a higher degree of motor and cognitive decline. An *APOE* E4 variant correlated with greater cognitive decline, in contrast to some other studies in PD. These data provide insights into pathogenic pathways in PD, and they may prove valuable in future in stratifying patients for clinical trials.

Movement Disorders 2019. Epub ahead of print Sept. 10.

Committee Activities

Clinical Care Committee

- **Rotation of Committee Chair:** Rotation of Committee Chair: Leadership for the clinical care committee rotates amongst the PADRECCs. The Houston PADRECC leads the committee for October. The committee meets via conference call the first Tuesday of the month at 12pm (EST)
- **Standardize and Optimize Clinical Care:** The committee continues to discuss latest research on PD, new treatment strategies and a variety of clinical issues to improve patient care and outcomes. It also serves to provide clinical support to the consortium network by focusing on measures to standardize clinical care across the PADRECC network. Recent agenda items have included discussions on:
 1. Clinical experience with newly introduced agents and therapies to include, inhaled levodopa and MRg - FUS for Essential tremor
 2. Continued discussions and progress towards delivering Telehealth to our veterans using VA Video Connect.
 3. Discussion about PADRECC functioning and administrative support structure, which plays a central role in delivering optimal care to our veterans.
 4. Updates on clinical experience with the use of relatively newer medication options like, Pimavanserin, deutetrabenazine and valbenazine.
 5. Continued discussion about referrals, outcomes, device and target selection trends regarding deep brain stimulation surgery for PD, ET, and dystonia.
 6. Continued discussion focused on clinical experience sharing among the group regarding DUOPA™ (carbidopa/levodopa) enteral suspension for the treatment of motor fluctuations in advanced Parkinson's disease

7. Discussion about newer clinic models to provide focused treatment for non-motor symptoms of PD (Palliative Care Clinics) and to improve overall health of our patient population (Brain Wellness Clinics)
8. Strategies to minimize the impact of reduced workforce at the PADRECC, ideas to improve performance and deliver care
9. Discussion about collaborative education and research, including participation in video case conference and involvement in industry-sponsored studies.

Education Committee

- **National VA PD Newsletter:** Currently in the editing phase and will be emailed to Consortium members and posted on the National website when completed.
- **PADRECC/EES Movement Disorder Series:** The final audioconference for FY 19 was held on September 12, 2019 “**PD 101**” by Dr. Ethan G. Brown, UCSF. The audioconferences are now available on VA TRAIN so non-VA clinicians can participate and receive CME credit. Please see the **Dates to Remember** section below for a listing of upcoming audioconferences and mark your calendars.
- **PD at Home:** Monthly PD telephone education/support group conference for patients and caregivers available nationwide on the 2nd Tuesday of each month: 10am PT, 11am MT, 12p CT, 1pm ET. Monthly flyers will be emailed to all Consortium Members, please advertise to your PD patients.
- **National Website Maintenance:** The committee performs maintenance checks of the National Website to ensure information is current and up-to-date.
- **PADRECC Transmitter:** This committee continues to assemble and distribute this *e*-newsletter every other month.
- **PADRECC is now on VA PULSE-** We invite you to follow us: <https://www.vapulse.net/community/care-topics/parkinsons-disease/overview>

On this page you can view notices of upcoming Movement Disorders Series presentations, links to all recorded webinars and our 20-video VA Parkinson’s playlist on YouTube. Also available are a wealth of resources for VA Professionals and Veterans/families, research publications, informational newsletters, and more.

- **Resources available on the National Website:**
 - **Patient Education Brochures-** <https://www.parkinsons.va.gov/patients.asp>
 - Exercise and Physical Activity
 - Fall Prevention
 - PD Medications
 - Motor Symptoms
 - Non-Motor Symptoms
 - Agent Orange and Toxic Exposures and PD
 - **My Parkinson’s Story-**<https://www.parkinsons.va.gov/patients.asp>
A series of short videos prepared by the VA PADRECCs addressing various aspects of Parkinson’s disease.
 - **Suggested Education Essentials for Veterans with PD** <https://www.parkinsons.va.gov/patients.asp>
 - **PADRECC Support Group Listings** <https://www.parkinsons.va.gov/patients.asp>
 - **Updated Resource Request Form-**PADRECC staff and consortium members can order bulk supply of FREE educational materials from PF and APDA. Please click on the following website

link and complete the *Resource Request Form* and fax or email to address listed:

<https://www.parkinsons.va.gov/clinicians.asp>

- **PADRECC Pocket Card:** *Parkinson's Disease Quick Reference Guide for Imitating Therapy* is available on the National Website:

<https://www.parkinsons.va.gov/Consortium/PocketCard/PocketCard19.pdf>

Dates to Remember

November 14, 2019

EES/PADRECC Movement Disorders Series

Topic: Review of Current Clinical Trials in PD

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

January 19, 2020

EES/PADRECC Movement Disorders Series

Topic: Ophthalmic Manifestations of Movement Disorders

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

March 12, 2020

EES/PADRECC Movement Disorders Series

Topic: To be Determined

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

April 25- May 1, 2020

American Academy of Neurology Annual Meeting

Toronto, Canada

<https://www.aan.com/conferences-community/annual-meeting/>

May 14, 2020

EES/PADRECC Movement Disorders Series

Topic: To be Determined

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

September 10, 2020

EES/PADRECC Movement Disorders Series

Topic: Palliative Care Needs in Parkinson's Disease

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

September 12, 2020

National VA PD Consortium Meeting (tentative)

Philadelphia, PA

September 13-17, 2020

International Parkinson and Movement Disorder Society Congress

Philadelphia, PA