



THE TRANSMITTER

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Article Reviews

Prepared by: Dr. Amie Hiller, Dr. Julia Staisch & Dr. Christopher Way Northwest PADRECC

PREDICT-PD: An Online Approach to Prospectively Identify Risk indicators of Parkinson's Disease

This study tested a previously developed model to determine persons at high risk for PD. The testing was done via an online survey and keyboard-tapping test done annually over three years. The risk algorithm included sex, smoking status, coffee consumption, hypertension, certain drug use, alcohol consumption, first degree relative with PD, constipation, head injury, depression/anxiety, and erectile dysfunction. They compared the risk score to “intermediate markers” of PD – smell loss, rapid eye movement-sleep behavior disorder, finger tapping speed and also to a diagnosis of PD. They recruited 1323 participants at baseline and had 842 complete the three year follow-up. Annual risk scores at baseline and follow-up visit correlated well with intermediate markers of PD at follow-up (all P values <0.001). They also added in testing for GBA variants and LRRK2 mutations, which were found in 47 participants, and adding this information further improved the risk score. They had only 7 person diagnosed with PD over the 3 years. Their model may be a first step in developing an at risk cohort. The online nature of the testing could present a fairly simple way to recruit a large number of participants.

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Blood-based NfL-A biomarker for differential diagnosis of parkinsonian disorder

Efforts in identifying biomarkers which may distinguish between neurodegenerative diseases have been limited due to poor sensitivity and or specificity. Furthermore, as most biomarkers for these diseases are CSF-based, their difficult access poses a barrier to their use in the outpatient setting. In a study which included three independent prospective cohorts, nearly 500 patients including PD, MSA, PSP and CBS and controls were evaluated. Blood NfL concentration was measured using an ultrasensitive single molecule array (Simoa). NfL is a marker of degeneration of large myelinated axons. It is increased in CSF of several neurologic disorders including stroke, traumatic brain injury, PSP, MSA, CBD, ALS, FTD, but not in PD. In this study, CSF levels correlated with blood levels. Furthermore, blood NfL was increased in patients with MSA, PSP, and CBS (i.e., all APD groups) when compared to patients with PD as well as healthy controls in all cohorts (p , 0.001). In one of the cohorts, blood NfL could accurately distinguish PD from APD (area under the curve [AUC] 0.91). This easily accessible biomarker could aid in distinguishing PD from PD plus syndromes before the clinical diagnosis becomes evident.

<http://m.neurology.org/content/early/2017/02/08/WNL.0000000000003680.short>

Incidence and Time Trends of Drug-Induced Parkinsonism: A 30-Year Population-Based Study

This study used the records-linkage system of the Rochester Epidemiology Project to identify all persons that received a diagnostic code of parkinsonism in Olmsted County, Minnesota from 1976 through 2005. The medical records were reviewed by 2 movement disorders specialists to define the year of onset and the type of parkinsonism. Drug-induced parkinsonism (DIP) was defined as parkinsonism with symptom onset within 6 months of treatment with antidopaminergic drugs, no parkinsonism before treatment and resolution of symptoms within 6 months of withdrawal of treatment if treatment was discontinued.

906 cases were identified with onset of parkinsonism between 1976 and 2005. 108 of these (11.9%) had DIP. The average annual incidence rate of DIP over 30 years was 3.3 per 100,000 person-years, 2.1 in men and 4.3 in women. In the youngest age group (0-39 years), DIP was the most common type of parkinsonism, accounting for 11 of 15 (73.3%) cases. However, the incidence of DIP increased with older age.

There was an overall trend towards a decrease in the incidence of DIP per decade, but only the decrease in women was statistically significant. Nearly all of the cases of DIP were associated with use of typical antipsychotics therefore the authors concluded that the use of newer atypical antipsychotics was the primary reason for the decline in DIP incidence.

Median age at onset of DIP was 70.9 years. Parkinsonism was tremor predominant in 57.4% and akinetic rigid in 42.6% of patients. Clinical features were symmetric in 82.4%. Only 2 of 12 patients showed some response to levodopa.

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Committee Activities

Clinical Care Committee

- **Rotation of Committee Chair:** Leadership for the clinical care committee rotates amongst the PADRECCs. The San Francisco PADRECC leads the committee for February/March. 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. New PD treatments in the pipeline, including ND0612, which is a proprietary formulation of levodopa and carbidopa continuously administered subcutaneously and extended release Amantadine formulation. Discussions focused on reviewing the safety, tolerability and clinical efficacy data, presented at recent scientific meetings.
 2. Continued discussion focused on clinical experience sharing among the group regarding 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 and Rytary (carbidopa/levodopa IR/SA combination oral medication). Recent discussions have focused on learning optimal titrating schedules, strategies to manage complication, logistical and support issues
 3. Continued experience sharing 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.
 4. Practical aspects regarding the use of DAT scans; applications and pitfalls, including the issue of drug interference
 5. Palliative Care: Review of palliative care resources and practices in the PADRECCs
 6. Veteran's Choice Program: re-distribution of resources, optimal use of the program, impact on VA based sub-specialty care.
 7. Consortium Sites: Strategies to improve communications, enhance educational and clinical support and develop research projects with the consortium sites.

8. New MRI body scanning protocols for DBS implanted patients
9. Discussed the FDA-approved antipsychotic for PD, pimavanserin. PBM review scheduled for Fall 2016. In the interim, local P/T committee review/approval required. PADRECCs have circulated their applications to streamline individual on-boarding. Discussed likely indication and criteria for use.
10. Continued discussion of Rytary and dosing strategies. Consensus that often more than a three times/day scheduled is needed.

Education Committee

- **PADRECC/EES Movement Disorder Series:** The 3rd audioconference for FY 17 was held on **March 9, 2017** "*Exercise As Medicine for PD*" by Dr. James Morley, Philadelphia PADRECC. The audioconferences are archived on the National website www.parkinsons.va.gov under the Movement Disorder Series tab. Please see the **Dates to Remember** section below for a listing of upcoming FY 17 audioconferences and mark your calendars.
- **National Newsletter:** Currently accepting articles for the **2017 VA Parkinson Report**. Articles should preferably cover, one or more of the following:
 1. Latest Research (Clinical or basic science) pertaining to PD
 2. Rehabilitation strategies pertaining to PD
 3. Discussion regarding management of certain clinical aspects of PD
 4. New diagnostic tools pertaining to movement disorders

Any other interesting topics can be considered, if discussed with us in advance. Contributors should review the previous VA Reports and avoid duplicating the topics covered in the last 2 years (unless it is an update). Previous newsletter can be found at: <https://www.parkinsons.va.gov/Consortium/Newsletter.asp>

If you are interested in submitting an article for the newsletter please email Glennys Asselin-Cavey (Glennys.Asselin@va.gov) and Suzanne Moore (Suzanne.Moore@va.gov).

Deadline for submission: **May 15, 2017**

- **Patient Education Brochures:** In response to the 2016 National VA PD Consortium Education Needs Assessment, the existing patient education brochures are in the process of being updated. Once completed they will be made available on the National Website for download.
- **National Website Maintenance:** The committee performs monthly maintenance checks of the National Website to ensure information is current and up-to-date.
- **“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 available on TMS:
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.

Dates to Remember

April 22-28, 2017

American Academy of Neurology: Annual Meeting

Boston, MA

<https://www.aan.com/conferences/2017-annual-meeting/submit-your-abstract/>

May 11, 2017

EES/PADRECC Movement Disorders Series

Topic: Creativity and Parkinson's Disease

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

June 4-8, 2017

21st International Congress of Parkinson's Disease and Movement Disorders

Vancouver, BC

<http://www.mdscongress2017.org/Congress-2017.htm>

September 14, 2017

EES/PADRECC Movement Disorders Series

Topic: Cognition and Exercise

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