



THE TRANSMITTER

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Article Reviews

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Predicting the Onset of Freezing of Gait: A Longitudinal Study.

Freezing of gait in advanced Parkinson's disease is a common symptom, occurring in up to 80% of patients; yet little is known about the onset and prediction of this debilitating feature. Very few longitudinal studies have ever been performed, thus limited the ability to intervene early in hope of ameliorating the symptoms. 221 PD patients were enrolled, and followed longitudinally for at least 2 follow up visits up to 2 year apart and were categorized into non-freezers, transitional freezers (i.e. no freezing at baseline, but subtle freezing at follow-up), and continual freezers. A logistic regression model was created in order to predict who would develop freezing over the next year, based on other clinical symptoms. Subjects who already endorsed freezing were found to have higher motor scores, and more frequently were non-tremor dominate phenotype. A combination of age, disease duration, disease phenotype, trail-making test, and the Hospital Anxiety and Depression sub scores were capable of predicting 84% of those subjects who would develop freezing of gait within the next year. Notably, the researchers did not obtain magnetic resonance imaging on any of these patients. The authors conclude that assessing specific symptoms may be able to predict the majority of subject who will develop freezing of gait within 15 months, which may allow prospective treatment options.

Movement Disorders Published Nov 18, 2017. <https://doi.org/10.1002/mds.27208>

Effect of High-Intensity Treadmill Exercise on Motor Symptoms in Patients With De Novo Parkinson Disease: A Phase 2 Randomized Clinical Trial

The Study in Parkinson Disease of Exercise (SPARX) researchers studied 128 outpatients (age range 40-80; H&Y Stages 1 and 2) with Parkinson's disease in three metropolitan areas over a 3 year period. Participants had been diagnosed with PD in the previous five years, were not exercising at moderate intensity more than three times per week at the time of enrollment, and were not expected to need dopaminergic medication within six months.

Participants were randomly assigned to high-intensity treadmill exercise (80-85 percent of maximum heart rates -MHR), moderate-intensity treadmill exercise (60-65% MHR), or usual care (maintaining usual exercise habits) for a period of six months. Feasibility measures were adherence to the prescribed heart rate and exercise frequency of three days per week and safety, while the clinical outcome was the six-month change in the Unified Parkinson's Disease Rating Scale (UPDRS) Part III motor score. Results revealed good MHR compliance with mean percent MHR of 80.2 percent (95%CI, 78.8%-81.7%) for the high-intensity group and 65.9 percent (95%CI, 64.2%-67.7%) for the moderate-intensity group ($p<0.001$). The mean change in UPDRS motor score in the high-intensity group was 0.3 (95%CI, -1.7 to 2.3) compared with 3.2 (95%CI, 1.4 to 5.1) in the usual care group ($p=0.03$), suggesting that exercise in the high intensity range may be associated with less motor symptom progression. No severe adverse musculoskeletal effects occurred. Limitations included treadmill exercise only with unknown specific effects of treadmill speed and incline adjustments.

JAMA Neurol. 2017 Dec 11. <http://doi.org/10.1001/jamaneurol.2017.3517> [Epub ahead of print]

Dietary Antioxidants and Parkinson's disease

Areas of the brain of individuals with Parkinson's disease not only on postmortem but also in living subjects has shown some markers of oxidized lipids, reductions of glutathione, and other signs of oxidative stress. Several toxins used in experimental models of PD and genetic mutations that cause PD observed and demonstrated that it affects the mitochondrial respiratory chain and increase oxygen radicals. This suggests that oxidative stress is an important contributor to both the initiation and progression of the disease. Numerous trials of antioxidants in individuals with PD have failed to demonstrate a slowing of the neurodegenerative process. This failure could be due to the fact that by the time of PD diagnosis, there is already substantial neuronal loss.

This article mentioned one cohort study in Sweden (80,000 individuals followed for 15 years), where they focused on 2 lipid-soluble antioxidants, Beta carotene and vitamin C. Their findings were beta carotene intake was inversely related to PD risk reduction of about 20-30% when comparing individuals in the highest quartile of intake with those in the lowest. In contrast, vitamin E and C were inversely related with PD risk only among women.

Mov Disord. 2017 Nov;32(11):1501-1503. <http://doi.org/10.1002/mds.27194> Epub 2017 Oct 4

Committee Activities

Clinical Care Committee

- **Rotation of Committee Chair:** Leadership for the clinical care committee rotates amongst the PADRECCs. The Southeast PADRECC leads the committee for January/February. 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 medications deutetrabenazine and valbenazine for Huntington's chorea and tardive dyskinesia.
 2. The management of orthostatic hypotension including the role of the newly FDA-approved agent droxidopa (Northera).
 3. 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
 4. The prevalence of vitamin D deficiency in Parkinson's disease and the need to monitor and adequately replete levels for bone and cognitive health.
 5. Practical aspects regarding the use of DAT scans; applications and pitfalls, including the issue of drug interference
 6. Continued discussion on the use of Pimavaserin (Nuplazid) in the treatment of psychosis associated with PD, compared to quetiapine and clozaril.
 7. Continued discussion of Rytary and conversion and titration dosing strategies. Consensus that often more than a three times/day dosing is needed.
 8. Discussion of the possible role for levodopa-induced hyperhomocystinemia in Parkinson's disease and the strategies to monitor and manage this problem

9. Discussion of the role of exercise in the treatment of PD and the practical aspects of “prescribing” exercise to patients.

Education Committee

- **PADRECC/EES Movement Disorder Series:** The second audioconference for FY 18 was held on January 11, 2018 “**The Role of Kinesiotherapy in the Treatment of Parkinson’s and other Movement Disorders**” by Lori Shuart, KT, Supervisor Kinesiotherapist, McGuire VAMC, Richmond, VA. 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.
- **PD at Home:** Monthly PD telephone education/support group conference 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 monthly 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.
- **Resources available on the National Website-** *Please share with your patients*
 - **Updated 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 and Consortium members can order bulk supply of FREE educational materials from PF and APDA. Please click on the following website and complete the Resource Request Form and mail or fax to address listed:
<https://www.parkinsons.va.gov/clinicians.asp>

Southeast PADRECC Updates

Acting Director: Dr. Jessica Lehosit

Research Update:

- The Michael J Fox Foundation funded study of eye movements as a biomarker for prodromal and manifest PD continues enrollment. The team will perform an interim analysis of data collected to date in January 2018.
- The longstanding research trial involving eye movement analysis resulted in intellectual property that was licensed to RightEye LLC in Bethesda Maryland. At the Consumer Electronics Show (CES) in January 2018, RightEye announced the release of a commercial product that will serve as an assistive tool for differential diagnoses of movement disorders. CES is the largest technology trade show in the world and RightEye was one of 32 companies out of the ~40,000 present honored with the prestigious CES Innovation Award for “Tech for a Better World”. Dr. George Gitchel continues his research on eye movement analysis and regularly consults the company in final development of the test.
- Boss-PD is a research study that compares the effectiveness of behavioral modification versus medication (Solifenacin) for the treatment of urinary incontinence in PD. The Richmond PADRECC is one of three sites involved in the study, with Atlanta VAMC serving as the lead site. Enrollment will begin in January.
- Richmond PADRECC has been selected as a site for USWorldMeds AP2-3000 study, involving continuous subcutaneous infusion of apomorphine. Currently a CRADA is in place. Regulatory and IRB approval are pending. Aim to begin enrollment in March.

Clinical/Education Update:

- Neurosurgeon Dr. Kathryn Holloway runs a robust Neurosurgical department that performs DBS surgeries and follow-up care for veterans with PD and ET. The table below shows numbers of DBS related procedures in 2017 at PADRECC Richmond.

Richmond 2017	
DBS Related Procedures	
Total Procedures	50
Battery changes	24
Stage 2 (battery/extension placement)	2
Unilateral	22
Bilateral	2
Total leads placed	27
Target:	
VIM leads	16
Gpi leads	11

Gpi/VIM combo	1
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- Richmond PADRECC Telehealth connects with multiple sites throughout the Southeast. In 2017, there were 404 clinical video telehealth (CVT) visits.
- Dr. Mark Baron was a webinar panelist in October 2017 for a Michael J Fox Foundation (MJFF) Third Thursday's Webinar "Screening for Parkinson's – What do a Dog and Keyboard Have in Common?" featuring non-invasive screening methods including Richmond's MJFF-funded study about eye movements. An archive is available at <https://www.michaeljfox.org/understanding-parkinsons/webinar-registration.php?id=29&e=1512877&k=07A6EF0CCE6AF24CC7C388179BBDDFA7>
- Richmond PADRECC has partnered with the Beth Sholom Rehabilitation community in Richmond for a series of Parkinson's Wellness Workshop events. Dr. Baron presented the key note on "200 Year Retrospective of Parkinson's Disease and Hope for the Future" in December. Staff members were round table discussion leaders.
- Richmond will be losing two key staff members to retirement in April 2018. Peggy Roberge, RN (Clinical Care coordinator) has been with PADRECC since inception in 2002. Lynn Klanchar RN, MS (Associate Director of Education) joined in 2005.
- Richmond PADRECC serves the Southeast United States catchment areas. There are 9 designated Consortium Centers in the region.

Southeast Consortium Center Updates:

- From Burton Scott, MD, PhD, Director at **Durham, NC**: Durham Consortium Center provides care for about 100 veterans with Parkinson's disease (PD). Our PD clinics meet 10 times a month and are staffed by two movement disorders neurologists, Dr. Burton Scott and Dr. Jeff Cooney, in addition to Anna Cotton, PA and a variety of Duke Neurology residents who rotate through the clinic. Physical therapy, occupational therapy, speech therapy, and social work support our available at our facility. The VA neurosurgeons, Dr. Dennis Turner and Dr. Nandan Lad perform about 6 Deep Brain Stimulation (DBS) surgeries at the Durham VAMC per year, and about 100 DBS surgeries per year at Duke University Medical Center across the street from the VA. Initial DBS programming is performed by Dr. Turner's group, and maintenance programming is done in our movement disorders clinics. In addition, Veterans are offered the opportunity to participate in multiple Parkinson's disease clinical trials at Duke University if they choose to, including trials sponsored by Biogen, Biotie, and the Parkinson Study Group.
- From Ramon L Rodriguez Cruz, MD, Director at **Orlando, FL**: An intestinal carbidopa levodopa program was implemented with the first patient successfully obtaining therapy. Orlando will have a Fellow in Movement Disorders and Behavioral Neurology. Services have expanded to provide botulinum toxins for all dystonias and sialorrhea.
Recent publication: [Mov Disord Clin Pract](#). 2017 Nov-Dec;4(6):829-837. doi: 10.1002/mdc3.12526. Epub 2017 Sep 20. Effect of Levodopa-carbidopa Intestinal Gel on Non-motor Symptoms in Patients with Advanced Parkinson's Disease. Standaert DG, Rodriguez RL, Slevin JT, Lobatz M, Eaton S, Chatamra K, Facheris MF, Hall C, Sail K, Jalundhwala YJ, Benesh J.

Dates to Remember

March 8, 2018

EES/PADRECC Movement Disorders Series

Topic: Tardive Dyskinesias

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

April 20, 2018 (*tentative*)

National VA PD Consortium Meeting

Los Angeles, CA

Additional information to follow

April 21-27, 2018

American Academy of Neurology~ Annual Meeting

Los Angeles, CA

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

May 10, 2018

EES/PADRECC Movement Disorders Series

Topic: Psychiatric Issues in Parkinson's Disease

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

September 13, 2018

EES/PADRECC Movement Disorders Series

Topic: Neurotoxin use for treating PD Symptoms

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

October 5-9, 2018

International Parkinson and Movement Disorder Society (MDS)~International Congress

Hong Kong

<http://www.mdscongress.org/Congress-2018.htm>