



VA | U.S. Department
of Veterans Affairs

**NATIONAL VA PARKINSON'S DISEASE
CONSORTIUM**
Education · Collaboration · Advocacy

THE TRANSMITTER

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Article Reviews

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Dementia and subthalamic deep brain stimulation in Parkinson disease: A long-term overview

The incidence of dementia in PD can vary from approximately 50 to 100 per 1000 patient-years; more than in age-matched controls. Up to 80% of patients with PD may develop dementia after 20 years of disease. Deep brain stimulation (DBS) is recommended in advanced PD with motor complications and reported to have better outcomes as compared to best medical therapy alone. Dementia has been considered an absolute exclusion criterion for DBS, considering that DBS surgery can worsen preexisting cognitive impairment. However, long and short-term data about cognition after DBS are lacking. Cognitive decline after DBS surgery is highly variable among different centers and there is lack of understanding about the factors and mechanisms that can increase the risk of dementia after STN-DBS. Moro et al. designed this retrospective study to assess both prevalence and incidence of dementia and preoperative and perioperative risk factors for developing dementia in the postoperative follow-up.

A total of 175 patients were included, and 104 were available at 10-year follow-up. Demographic data, disease features, medications, comorbidities, nonmotor symptoms, PD motor scales, neuropsychological scales at baseline, and perioperative complications were collected for each patient. Dementia prevalence was 2.3% at 1 year, 8.5% at 5 years, and 29.8% at 10 years. Dementia cumulative incidence at 1, 5, and 10 years was 2.3%, 10.9%, and 25.7%, respectively. The corresponding dementia incidence rate was 35.6 per 1,000 person-years. Male sex, higher age, hallucinations, lower frontal score at baseline, and perioperative cerebral hemorrhage were predictors of dementia. Hence, it was concluded that in patients with PD with longstanding STN-DBS, dementia prevalence and incidence are not higher than those reported in the general PD population.

Neurology 2020;95(4):e384-e392. doi:10.1212/WNL.0000000000009822

Deep brain stimulation in early-stage Parkinson Disease: Five-year outcomes

Deep brain stimulation (DBS) is typically considered for advanced PD with motor complications. Clinical trials evaluating DBS in mid-stage and advanced stage PD consistently demonstrate the symptomatic superiority of DBS plus medications versus best medical therapy alone. An earlier clinical trial designed as prospective, randomized, and single blinded provided class II evidence that STN DBS implanted in very early-stage PD slows the progression of rest tremor. The trial met its primary safety endpoint at 24 months. Long term follow

up of patients with early-stage PD treated with DBS is lacking. In addition, early-stage PD patients will be exposed to neurostimulation for longer; hence, better understanding of durability and efficacy of STN DBS therapy is required. This study's objective was to report 5-year outcomes from the safety and tolerability trial of DBS in early stage PD.

29 PD patients who previously completed the 2-year pilot trial provided written informed consent to participate in an observational follow up study that included annual outpatient visits at 3,4, and 5 years after baseline. Early STN DBS with optimal drug therapy participants required lower levodopa equivalent daily doses, and the odds of requiring polypharmacy at 5 years was lower as compared to early optimal drug therapy participants (statistically significant). The odds of having worse rest tremor for early STN DBS participants were also significantly lower as compared to those of early optimal drug therapy participants. The safety profile was similar between groups. These results suggest that early DBS reduces the need for PD medications while providing long-term motor benefit over standard medical therapy. This study provides Class II evidence that DBS implanted in early-stage PD decreases the risk of disease progression and polypharmacy as compared to optimal medical therapy alone.

Neurology 2020; 95(4):e393-e401. doi:10.1212/WNL.00000000000009946

Huntington's disease alters human neurodevelopment

Although Huntington disease (HD) is typically thought of as an adult onset disorder, childhood onset is known to occur. Mutation carriers develop cortical atrophy that precedes motor symptom onset by as much as a decade. The authors, largely from Grenoble among other institutions, analyzed human fetal and embryonic mouse brain. The mutant HD protein ("huntingtin") impaired movement of neuronal progenitor cells, leading to premature differentiation into neurons. Similar changes were observed embryonic stem cells grown in cell culture.

Exactly how these early developmental events affect the long delayed but inevitable effects of mutant huntingtin in affected individuals is still not clear. Nonetheless, these findings raise important questions about the timing of therapeutic approaches under development that intend to mitigate the effects of the mutation.

Science 2020; 369(6505):787-793.

Committee Activities

Clinical Care Committee

- **Rotation of Committee Chair:** Leadership for the clinical care committee rotates amongst the PADRECCs. The West LA PADRECC leads the committee for September and 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. Discussion regarding COVID 19 pandemic-clinical challenges and solutions, including the need for enhanced assessment and aggressive treatment of depression using tele-technology amongst the home confined patients across the nation.
2. Discussion about Cala Trio Device for the management of essential tremor. This device is now available upon request through the Prosthetics Service.
3. Updates on clinical experience with newer medications – Nourianz (Adenosine Receptor antagonist), Gocovri and Imbrija Inhaler
4. Discussion about newly approved medications including apomorphine sublingual film (KYNMOBI).
5. Discussion about involvement with ongoing Levodopa Pump study – NeuroDerm
6. Clinical experience with newer DBS systems including Boston Scientific’s “Vercise” and Abbott’s “ St. Jude Medical Infinity DBS”.
7. CSP # 2015 Trial, planning and trial initiation related matters.
8. Discussion about implementation of the Neurology Cube – a national VA web-tool that will enable us to visualize population-level data obtained from the electronic medical record on VA patients with Parkinson’s disease.

Education Committee

- **National VA PD Consortium Bi-Annual Meeting-** due to Covid 19 pandemic meeting will be held virtually on **January 29th, 2021**. More details to follow.
- **PADRECC/EES Movement Disorder Series:** The final audioconference for FY 20 was canceled, we apologize for the late notice but will reschedule topic for future audioconference. FY 2021 schedule is being developed and will be posted once available.
- **National VA PD Newsletter:** The newsletter was disseminated via email to all PADRECC and Consortium Members and is available on the National Website:
https://www.parkinsons.va.gov/NationalNewsletter/Summer_2020_VAParkinsonReport_Final.pdf
- **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.
- **New Partnership-VHA/PADRECC and The Parkinson’s Foundation:** Goal of the partnership is to improve the care and quality of life for Veterans living with PD through collaborative education, research and services. This committee will be spearheading many of the projects planned for this partnership
- **National Website Maintenance:** The committee performs periodic 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:**

- **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>
- **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>

Houston PADRECC Service Area Updates

Michael E. DeBakey VAMC

Director: Aliya Sarwar, MD

Parkinson's Disease Research, Education and Clinical Center (PADRECC) housed in the Michael E DeBakey VA Medical Center provides state of the art medical and surgical services to Veterans with Parkinson's disease and related movement disorders who reside in the South Central and Mid-Western United States. The area served by the Houston PADRECC includes all or parts of the following states: Texas, Louisiana, Mississippi, Oklahoma, Arkansas, Alabama, Florida, Kansas, Missouri, Indiana, Illinois, Wisconsin, and Kentucky (Houston PADRECC Consortium).

Consortium Update

VA North Texas Health Care System at Dallas, TX was added as a new consortium center site in February 2020. **Meagen Salinas, MD**, a movement disorders neurologist is the site director.

In FY 20, we have continued our monthly educational meetings with all our consortium sites that include clinical case discussion, and sharing of latest clinical, educational and research related information amongst the site participants.

Clinical Update

Houston PADRECC is functioning without any dedicated administrative support. In FY 20, our last remaining administrative support position (Program Support Assistant, Office Automation Clerk) was vacated at the end of October 2019 following the retirement of Mr. Arnold Love. This along with our Administrative officer's

(vacant since 2017) and Research Health Science Specialist's positions are unfilled to date due to SCS hiring freeze and/ or lack of funding support. Our 4th movement disorders neurologist position (funded by the facility) also remains vacant.

Despite this personnel shortage, in keeping with our past performance, Houston PADRECC remained ahead of all other PADRECCs (single hospital comparison) with respect to patient encounters until March 2020, prior to being impacted by COVID 19 pandemic.

In late March 2020 due to the health precautions related to the pandemic, Houston PADRECC shifted to 100% tele-medicine with no face to face encounters (except to address urgent matters) until the last week of May 2020, when we re-opened our Neurotoxin injection clinics, while strictly following VA health and safety guidelines.

Accolades:

Beth Boncher RN was inducted in the selection committee of the **VA STAR** program.

Dr. Michele York received the following Awards in FY20:

- **Women of Excellence Award, Baylor College of Medicine, 2020**
- **Houston Business Journal Health Care Hero, 2019- The annual award recognizes outstanding healthcare practitioners, physicians and rising stars who make a difference in healthcare and in the community.**
- **Star Clinician Excellence Award, Baylor College of Medicine**

Education Update

Houston PADRECC 's Associate Director for Education position still remains unfilled due to SCS hiring freeze. We have continued our 16 educational programs geared towards patients/caregivers, medical trainees and practicing healthcare providers. These include:

- 1) Clinic based patient/caregiver education
- 2) Patient's monthly educational support group
- 3) Patient and Caregiver educational conference (Educational Forums)
- 4) Collaborative Patient Educational Programs with Community groups
- 5) Patient and Caregiver based educational newsletter (PADRECC Pathways)
- 6) Medical Staff's weekly educational conference
- 7) Medical staff's monthly journal club
- 8) Physicians' Clinical Case Discussions
- 9) Medical staff's monthly inter-disciplinary surgical case discussion series
- 10) Monthly Consortium based tele- educational meeting
- 11) PADRECC based BCM neurology residents monthly elective rotation
- 12) PADRECC's joint educational venture with Pharmacy residency training program
- 13) In-patient medical student and medical residents hands on educational experience
- 14) PADRECC physicians' lectures (including grand rounds, invited lectures) at the VA, BCM, national and international locations
- 15) Contribution to the transmitter (e-newsletter)
- 16) Nurse lecture series.

New Initiatives:

- In FY20, Dr. Sarwar began QI (quality improvement) lecture series geared towards our nurses regarding latest management guidelines (nursing perspective) pertaining to PD and related movement disorders. (once/month)

- Initiated PADRECC based Geriatric Fellows movement disorders rotation (Baylor College of Medicine, MED VAMC) 2-4-week training of geriatric fellows at Houston PADRECC (1-2 fellows/FY).
- Neurology Residents Tele-Medicine Training

Accolades

- Dr. York received Norton Rose Fulbright Educational Award for Enduring Educational Materials, Baylor College of Medicine in Nov. 2019
- Dr. Jamal received Norton Rose Fulbright Educational Award for Teaching and Evaluation, Baylor College of Medicine in May 2020
- Dr. Jamal received the “Clerkship Teaching Award”, July-December 2019 and Faculty Teaching Award at BCM Neurology in June 2020.

Research Update

We currently have **11** active research projects. In FY20, we continued recruitment in our Circadian Rhythm/ Sleep Study and screening subjects for a collaborative project with the GI department entitled “High Resolution Manometric Abnormalities of the Esophagus and Clinical Features of Gastroesophageal Reflux in Patients with Parkinson’s Disease” until the face to face aspect of the research studies was halted in March 2020 due to COVID 19 Pandemic related health precautions.

New Initiatives in FY20: (grants submitted and new collaborations)

- **Rural Health (ORH grant)**- “Rural Veterans with Depression and Parkinson's Disease: A Telehealth Psychotherapy Solution.” Collaborative project with MH, (PI: Interian, MD, Co-I: Sarwar, MD) ~ Submitted
- **H-47756. Houston Alzheimer Disease Research Center Consortium: Clinical Cohort.** Submitted to IRB. Pilot enrollment of MEDVAMC dementia patients, including neurological and neuropsychological exams, banking of blood for whole genome sequencing, and tau PET. Pilot funds provided through BCM including for completion of tau PET at Houston Methodist. PDD and DLB patients from PADRECC will be eligible in the expanded protocol. Preparation for revision of P30 for Sept. 2020 (<https://grants.nih.gov/grants/guide/rfa-files/RFA-AG-21-019.html>). Jackson, GR, MD, PhD (Co-I)
- **Tryptophan metabolism, gut microbiome, and sleep deficiency**”, Li Jiao, MD, PhD (PI), Sarwar, AI (Co-I)

Publications and other research presentations (10/1/2019 – 05/30/2020)

- Abstracts/posters = 7 (accepted or presented)
- Manuscripts = 10 (5 published or accepted, 3, under review, 2 in development)

Dates to Remember

November 12, 2021

EES/PADRECC Movement Disorders Series

Topic: TBA

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

January 29, 2021

National VA PD Consortium Meeting

Philadelphia, PA

April 17-23, 2021

American Academy of Neurology - Annual Meeting

San Francisco, CA (in person) & Virtual Component

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

September 12, 2020 - September 16, 2020

International Congress of Parkinson's Disease and Movement Disorders

Location: Virtual Offered By: International Parkinson and Movement Disorder

www.mdscongress.org