Current Research at the Philly VA

Parkinson's Disease & Motor Symptoms

Dr. James Morley, Associate Research Director of the PADRECC, studies whether quantitative motor assessments can help identify early signs of PD and make the diagnosis of movement disorders more accurate. Assessments used in the PADRECC include computerized writing analysis and quantitative gait assessment using wearable motion sensors. We have found that these assessments reliably distinguish between PD patients and subjects with other movement disorders. Future studies are directed at determining how best to use these tools as clinical biomarkers of early disease or monitors of progression.

Medication-Induced Parkinsonism

Dr. James Morley is conducting a study to understand how Parkinson's-like symptoms caused by medications are related to idiopathic PD. Drug-induced parkinsonism is a risk factor for future PD and in some cases these drugs may serve as a "stress test" for the nigrostriatal pathway revealing subclinical dysfunction such as preclinical PD. Dr. Morley's team is comparing medication-exposed patients with and without Parkinsonism using olfactory testing and questionnaires to assess prodromal non-motor symptoms, physical exam, biochemical biomarkers and dopamine transporter SPECT. Additionally, patients with symptoms are being followed clinically after the offending medication is switched or stopped. These studies will help us to better understand which subjects with drug-induced symptoms are at risk for PD and offer a novel strategy to identify a cohort of subjects with preclinical disease.

Nutrition and Parkinson's Disease

Dr. John Duda, PADRECC Director, and Heidi Watson, RN, are conducting a study to determine feasibility of following a plant-based diet with the proper education and resources in addition to studying the effects of such a diet on the symptoms of Parkinson's disease. The study includes 3 months of bi-weekly sessions of education, food preparation and nutritional expertise. It is hoped that this study will allow patients to feel comfortable to change their diet to one that may improve the symptoms of PD.

Parkinson's Disease & Blood Pressure Medication

We are currently conducting a clinical trial to test the effects of midodrine on symptoms of dizziness on standing in PD patients who do not have measurable orthostatic hypotension (orthostatic intolerance). This study is motivated by prior work conducted at the PADRECC by Dr. Amy Hellman using continuous non-invasive arterial pressure monitoring to show abnormal control of blood pressure responses in some PD patients with orthostatic intolerance. It is hoped that the results of this study will be able to provide additional options for the treatment of disabling dizziness to patients with PD.

Traumatic Brain Injury

Dr. John Duda and his colleagues, Drs. Kacy Cullen and John Wolf, from the Department of Neurosurgery at the University of Pennsylvania, continue studies funded by the Rehabilitation Research and Development Service of the Department of Veterans Affairs to develop animal models of Chronic Traumatic Encephalopathy (CTE), that sometimes develops years later in people such as football players and war fighters who have had traumatic brain injuries. The goal of these studies is to develop models of these changes in the brains of animals so that novel treatments and preventive strategies can be tested. It is hoped that these studies will lead to treatments to prevent the development of these neurodegenerative diseases in Veterans and others who have suffered head injuries.

Neurorestoration in Parkinson's Disease

Dr. John Duda and his colleague Kacy Cullen, PhD are conducting a two-year study with funding from the Michael J. Fox Foundation for Parkinson's Research to investigate experimental reconstitution of the nigrostriatal pathway (the pathway that degenerates in PD and causes the motor symptoms) in animal models of PD. It is hoped that this study will lead to better understanding of the difficulties with this type of approach and support further studies that will eventually make this a therapeutic option for people living with PD.