

Dr Kyle Williams MRI research 2019

To date little imaging research has been done for PANDAS, indicating a clear need for continued research in this area. MGH's current project is to identify structural changes in the basal ganglia nuclei that may either result from, or be indicative of, inflammation.

Using a novel MRI method used for research purposes only, over thirty PANDAS patients and healthy controls were scanned. Preliminary findings indicate that children with PANDAS have larger areas of inflammation within the basal ganglia when compared to healthy control children. These structures have been found to be abnormally large in previous studies of children and adults with OCD.

Also, some neuronal structural changes were found and thought to be due to inflammatory processes. The correlation of inflammation appears to occur with OCD symptom severity.

With this pilot research funded by donors through PANDAS Network, Dr Kyle Williams and the MGH team were able to receive the inaugural Scientific Innovator Award from the International Obsessive-Compulsive Foundation, which will help fund this trial study for the next three years.

The project will expand comparing children with PANDAS to children with Obsessive Compulsive Disorder (and healthy controls) to evaluate if any changes observed in the brain are specific to PANDAS, or generalizable to OCD, which may help us to develop imaging tests to assist in the diagnosis of PANDAS.

At the completion of this study, MGH will have conducted the largest and most complete neuroimaging study of PANDAS children to date and it may also provide valuable information to better our diagnostic capabilities for children with PANDAS.

MGH has ongoing efforts to expand scientific research in the field of PANDAS and thanks all families and donors for their contributions.