Determining the Association between Polygenic Risk Scores and Cortical Thickness in Parkinson's Disease Patients: an MRI Structural Study

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Abstract

Polygenic risk score (PRS) is a number derived from summing the weighted effects of single nucleotide polymorphisms (SNPs) linked to an increased risk of disease. SNPs associated with increased risk derive from GenomeWide Association Studies (GWAS) that have compared large cohorts of PD patients to controls to determine which genetic loci are associated with PD. In Parkinson's Disease (PD), higher PRS has been associated with faster motor and cognitive decline. However, the extent to which cortical brain changes in PD patients are associated with PRS has not been reported in the literature. This is an exploratory study to determine if there is evidence for such a correlation that warrants further investigation.

Biography

Ishar Alexander Kalsi is a Medical Student at the GKT School of Medical Education, King's College London. He has an interest in Neurology. This research was conducted at NINDS/NIH over the summer of 2019.

Publication

1. How does RNA interference affect the dpy-13 gene in C. elegans and what can be inferred for a potential therapy for patients with Hutchinson-Gilford progeria syndrome?

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