

How Effective is Deep Brain Stimulation Targeting of the Globus Pallidum as a Therapeutic Site for the Reduction of tics in Patients with Gilles de la Tourette's Syndrome

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Abstract

Gilles de la Tourette syndrome (GTS) is a classified neurodevelopmental motor disorder that manifests in involuntary movement. Early onset symptoms of GTS present involuntary movement known as tics. The causes of GTS syndrome are thought to be associated with the globus pallidus which is associated with involuntary and voluntary movements. There are a variety of treatment options available ranging from psychopharmacological interventions to psychological therapy to help manage symptoms of Gilles de la Tourette syndrome. In severe cases neurosurgical intervention known as Deep brain stimulation is required to manage and eliminate tics. Previously Thalamic sites were targets for DBS. New evidence indicates that the GP is an effective site for DBS when treating GTS. Search methods and choice criteria: PRISMA guidelines were used to structure and conduct this systematic review. A variety of data bases were used to obtain relevant research papers, these included: PubMed, Science Direct, Medline & Google Scholar. This is a systematic review which aims to critically appraise evidence examining the effectiveness of DBS targeting of the GP in reducing tic severity, in GTS in comparison to thalamic sites. Authors' conclusions: The GP is an effective target for DBS when treating GTS, it reduces tic severity, improves quality of life and has fewer side effects than Thalamic targets.

Biography

Ghada Saleem Amaireh has completed her undergraduate studies in Psychology with Clinical Psychology at the University of Lincoln. She has also completed a Master's

of Science in Clinical Neuropsychiatry at the University of Birmingham Medical School. At the age of 24 she was accepted into a PhD studentship examining brain-to-brain synchrony at the University of Nottingham set to start December 2021.