

Multiple target deep brain stimulation for Holmes tremor

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Introduction

Holmes in 1904 described a tremor which resulted from the destruction of the rubrospinal tract. Later it was named Rubral tremor. Medical treatment is usually ineffective and most of the patients need surgical intervention.

Methods

This is a case report.

Results

This 11-year-old girl was admitted to the hospital in March 2003 with the diagnosis of right thalamic abscess. Stereotactic abscess drainage and antibiotics treated the abscess successfully. However, 4 months after the treatment she developed left sided upper extremity tremor and dystonic movements. She underwent a right-sided Vim DBS in October 2005. Her complaints decreased gradually in the following months. However, 3 years after the surgery, the dystonic movements begun to disturb her. So an additional DBS for right GPi was performed in December 2008. Her dystonia responded well to this second surgery. Today, 5 years after second surgery she has slight but non-disturbing dystonia in her left hand.

Conclusions

In Holmes’ tremor, due to the tremor and dystonic components, both VIM and GPi should be the surgical targets.

Learning Objectives

Multiple target for surgical treatment of Holmes' tremor will be better for the patient.

References