

Introduction

A current challenge lies in finding an effective and safe treatment for patients with severely disabling Tourette’s syndrome (TS) and comorbid psychiatric disorders who fail to respond to conventional treatments. Here, we evaluate the utility of globus pallidus internus deep brain stimulation (GPi-DBS) combined with bilateral anterior capsulotomy in treating these clinically challenging patients.

Methods

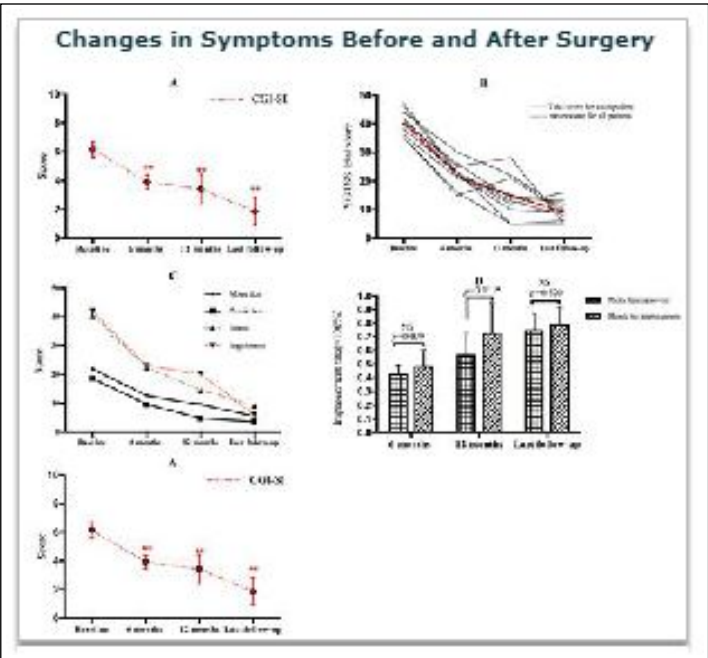
We conducted a retrospective review of the clinical history and outcomes of 10 patients with treatment-refractory, severely disabling TS, and psychiatric comorbidity who underwent GPi-DBS combined with bilateral anterior capsulotomy in our hospital. At the time of surgery, patients presented mainly with obsessivecompulsive disorder and affective disorders. Clinical outcome assessments of tic and psychiatric symptoms, as well as of general adaptive functioning and quality of life, were performed at the time of surgery and at 6 months, at 12 months, and between 24 and 96 months post-surgery.

Results

After surgery, all patients showed significant progressive improvements in tic and psychiatric symptoms along with improvements in general adaptive functioning and quality of life. Alleviation reached 64% at 12 months and 77% at last follow-up on the Yale Global Tic Severity Scale. At the final follow-up, patients were functionally recovered and displayed no or only mild tic and psychiatric symptoms. All patients tolerated treatment reasonably well, with no serious side effects.

Conclusions

GPi-DBS combined with bilateral anterior capsulotomy seems to offer major clinical benefits to patients with severely disabling and otherwise treatment-refractory TS and psychiatric comorbidity.



A) Mean score on the Clinical Global Impression-Severity (CGi-SI) scale before surgery and after surgery. B) Total score on the Yale Global Tic Severity Scale (YGTSS) for each patient before surgeryand after surgery was indicated with a black line, and mean total score on YGTSS was indicated by red dotted line.C) Mean total and subscale scores on the Yale Global Tic Severity Scale (YGTSS) before and after surgery.D) Mean improvements in motor and phonic tics, measured by the Yale Global Tic Severity Scale (YGTSS) subscale scores.E) Mean score on the Social Disability Screening Schedule (SDSS) before surgery and after surgery.

References

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Learning Objectives

Over recent decades, DBS has gained popularity in neurologic and psychiatric disorders such , but stereotactic ablative surgery is worthy of consideration on its own merits with respect to both efficacy and safety. GPi-DBS combined with bilateral anterior capsulotomy seems to offer major clinical benefits to patients with severely disabling and otherwise treatment-refractory TS and psychiatric comorbidity.