FULL-LENGTH ARTICLE NPub.org/9jcht0

Safety and long-term efficacy of ventro-oral thalamotomy for focal hand dystonia

A retrospective study of 171 patients

Shiro Horisawa, MD, Taku Ochiai, PhD, Shinichi Goto, MD, et al.

Cite as: *Neurology*® 2019;92:e371-e377. doi:10.1212/WNL.0000000000006818

Correspondence
Dr. Taira
ttaira@nij.twmu.ac.jp

Study objective

To assess the safety and long-term efficacy of ventro-oral thalamotomy (vo-thalamotomy) in patients with task-specific focal hand dystonia (TSFD).

Summary results

Vo-thalamotomy is reasonably safe and effective in patients with TSFD.

Classification of evidence

Class IV.

What is known and what this paper adds

Case reports and some small-scale studies have reported that vo-thalamotomy is a highly effective treatment for TSFD. This large case-series study provides further evidence for the efficacy of vo-thalamotomy in patients with TSFD.

Participants and setting

This study reviewed data for 171 patients with TSFD (76% male; mean age at surgery, 37.1 ± 12.3 years) who underwent unilateral vo-thalamotomy performed by a single surgeon between October 2003 and February 2017 at the Tokyo Women's Medical University Hospital. All procedures were performed ≥12 months after the onset of TSFD. These patients were free of other neurologic conditions.

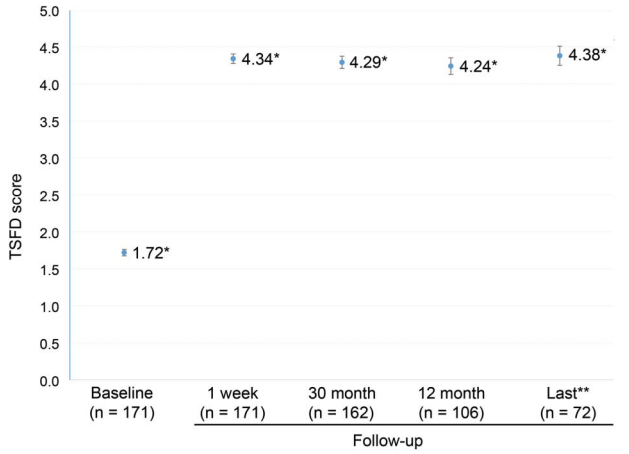
Design, size, and duration

Each participant's condition was assessed with the TSFD scale, on which lower scores indicate more severely impaired task performance, at preoperative and 1-week, 3-month, and 1-year postoperative timepoints. Later assessments were performed in some patients. This study used 1-way repeated-measures analysis of variance with post hoc Tukey-Kramer multiple-comparisons adjustments to detect from-baseline changes in TSFD scale scores after surgery. Any postoperative adverse events were noted.

Primary outcome measures

The primary outcomes were from-baseline changes in TSFD scale scores after surgery.

Figure TSFD scale scores recorded before and after vo-thalamotomy



*p < 0.001 relative to the baseline scores. **The mean last available follow-up timepoint was 47.36 months after surgery (range, 13–165 months after surgery).

Main results and the role of chance

From-baseline improvements in TSFD scale scores were observed at all postoperative timepoints, including the last available follow-up assessments (p < 0.001 for all postoperative timepoints). Permanent adverse events, such as mild foot weakness, were recorded in 6 patients (3.5%), and temporary adverse events were recorded in 28 patients (16.4%).

Bias, confounding, and other reasons for caution

This study was conducted retrospectively and did not have a control group or any blinding.

Generalizability to other populations

This study's single-center nature may limit the generalizability of the results.

Study funding/potential competing interests

This study received no funding. Some authors report receiving consulting and speaking fees from various healthcare companies. Go to Neurology.org/N for full disclosures.

A draft of the short-form article was written by M. Dalefield, a writer with Editage, a division of Cactus Communications. The authors of the full-length article and the journal editors edited and approved the final version.