**Supplemental Digital Content 1.**

**Diagnosis of Adductor Spasmodic Dysphonia**

Clinical evaluation included history, physical examination, and laryngeal stroboscopy. Each patient exhibited all of the following: i) intermittent glottal stops (vowel breaks) in vowels on voiced sentences, ii) strain-strangled, effortful, tight voice quality, iii) reported effortful speaking, and iv) laryngeal stroboscopy demonstrated normal structure and symmetry of the vocal folds at rest, and intermittent vocal fold hyperadduction. Patients were excluded if they had a current or previous diagnosis of abductor spasmodic dysphonia, muscle tension dysphonia, essential tremor, or Parkinson’s disease. Additional exclusion criteria included the following: i) intermittent breathy breaks in voiceless consonants before vowels, ii) intermittent abductor spasm of the vocal folds during speech, iii) continuous supraglottic compression obscuring the vocal folds during voice production, iv) absence of phonatory breaks, v) similar voice quality abnormalities on all types of sounds, vi) axial tremor, vii) contraindications for neurosurgery (e.g. coagulopathy), or viii) were left-handed. All patients in the trial were therefore right-handed. All patients had received speech therapy and botulinum toxin injections during the course of their illness. Patients provided written consent to participate in the study and stopped botulinum therapy six months before their first evaluation and surgery.

The sample size of six patients was chosen following a power calculation using normative data for the Voice-Related Quality of Life measure (V-RQOL).16 The probability was 80 percent that the study would detect a treatment difference at a 0.05 significance level in the V-RQOL, if the true difference between the treatments was 25 points (the number required to move from ‘poor’ to ‘good’).