

Evaluation of Patient Satisfaction with Deep Brain Stimulation in Pediatric Population with Secondary Dystonia

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Introduction

Deep brain stimulation (DBS) surgery has proven beneficial in improving quality of life outcomes in adults with medically refractory movement disorders. However, the role of DBS in the outcomes of pediatric patients suffering from movement disorders, particularly secondary dystonia, remains limited. The authors present the results of a patient satisfaction survey performed for a series of six patients (< 18 years old) with secondary dystonia treated with DBS of globus pallidus internus (GPI).

Methods

A retrospective clinical database review of all DBS cases performed at UCLA from 1998 to 2013. Patients were contacted via telephone for a short interview to appraise the patients' or their caregivers' opinions on their quality of life after DBS. Questions asked were: "Has the DBS improved your quality of life," and "Would you repeat the surgery again?"

Results

Six patients were identified with secondary dystonia and age < 18 years at time of surgery, with a mean age of 15.3 years \pm 4.6 years. The etiology of secondary dystonia was due to cerebral palsy in two cases, viral infection in two patients, PANK2 deficiency in one, and one undiagnosed. GPI was targeted in all patients. Five patients (83%) were able to be successfully contacted by phone. All five responded affirmatively to both questions: DBS did improve their quality of life and they would do the surgery again.

Table 1

	Primary disease	Sex	Age at DBS insertion	Year of Surgery	Quality of life after surgery*	Would do the surgery again?
Case 1	Meningitis Viral	M	14	2002	Improvement	Yes
Case 2	Meningitis Viral	F	14	2006	Improvement	Yes
Case 3	Cerebral Palsy	F	16	2001	Improvement	Yes
Case 4	Undiagnosed cause	F	16	2010	Improvement	Yes
Case 5	PANK2 deficiency	F	18.0	2000	No follow-up	No follow-up
Case 6	Cerebral Palsy	F	11	2012	Improvement	Yes

DBS, deep brain stimulation; GPI, globus pallidus internus.

* Question 1: DBS did improve their quality of life?

** Question 2: would do the surgery again?

Conclusions

The subjective response of pediatric patients regarding the impact of surgical decisions on the quality of their lives is not clear in the functional literature. While simplistic, this questionnaire provides an appraisal of the basic elements of patient satisfaction with DBS. This paper revealed a high level of patient satisfaction with DBS for secondary dystonia in pediatric patients.

Learning Objectives

patient satisfaction after DBS for Dystonia

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