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Deep Brain Stimulation for Parkinson Disease: An Expert Consensus and Review of Key Issues.

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Abstract

OBJECTIVE: To provide recommendations to patients, physicians, and other health care providers on several issues involving deep brain stimulation (DBS) for Parkinson disease (PD). Data Sources and

STUDY SELECTION: An international consortium of experts organized, reviewed the literature, and attended the workshop. Topics were introduced at the workshop, followed by group discussion. Data Extraction and Synthesis A draft of a consensus statement was presented and further edited after plenary debate. The final statements were agreed on by all members.

CONCLUSIONS: (1) Patients with PD without significant active cognitive or psychiatric problems who have medically intractable motor fluctuations, intractable tremor, or intolerance of medication adverse effects are good candidates for DBS. (2) Deep brain stimulation surgery is best performed by an experienced neurosurgeon with expertise in stereotactic neurosurgery who is working as part of a interprofessional team. (3) Surgical complication rates are extremely variable, with infection being the most commonly reported complication of DBS. (4) Deep brain stimulation programming is best accomplished by a highly trained clinician and can take 3 to 6 months to obtain optimal results. (5) Deep brain stimulation improves levodopa-responsive symptoms, dyskinesia, and tremor; benefits seem to be long-lasting in many motor domains. (6) Subthalamic nuclei DBS may be complicated by increased depression, apathy, impulsivity, worsened verbal fluency, and executive dysfunction in a subset of patients. (7) Both globus pallidus pars interna and subthalamic nuclei DBS have been shown to be effective in addressing the motor symptoms of PD. (8) Ablative therapy is still an effective alternative and should be considered in a select group of appropriate patients.

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