

DEEP BRAIN STIMULATION (DBS) FOR PARKINSON'S DISEASE (PD) SHOULD BE STARTED BEFORE MOTOR COMPLICATIONS OCCUR

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Background: Surgery for Parkinson's disease (PD) is increasingly used and published. Neurologists are much more involved than in the past in selection of patients for surgery, in intra operative assessment, in post operative evaluation as well as in documentations of outcome and publication of results. However, published algorithms for treatment of PD still list the alternative of surgical treatment at the very end of the algorithm, suggesting surgery only after all available treatments has been exhausted.

Objectives: In view of excellent results of modern surgical trials, especially Deep Brain Stimulation (DBS) in Subthalamic Nucleus (STN) and in view of the low risk of severe complications of DBS, one may wonder whether surgery should be offered earlier in the course of the illness. There are some hints in the literature towards earlier surgery for PD. The aim of this presentation is to argue for early surgery in PD patients.

Methods: A careful review of the literature so far is conducted and both expert opinions, as well as published trials on early surgery for PD are assessed.

Results: Already in papers published in 2002, neurologists analyzing the results on their cohort of patients operated of DBS in the STN stated that "there was also a tendency for patients with longer disease duration to be less improved by surgery, suggesting that STN stimulation might be envisaged at an earlier stage of the disease". They suggested that "age, long disease duration and residual axial motor symptoms are factors contributing to an unfavourable motor outcome of neurosurgery. A recent paper published in 2007 from France concluded that STN DBS should be considered as a therapeutic option early in the course of Parkinson's Disease. This statement was the result of a randomized control trial on 20 patients with mild to moderate motor disability who were randomized to optimized medical treatments or to STN DBS.

Discussion and conclusion: Surgery for PD provides symptomatic treatment and diminishes adverse effects of medical therapy. Early surgery should prevent the lost of opportunity associated with the disability of patients that exists despite medical treatment. This disability may affect the ambition and expectation of the patient and may lead to social withdrawal, earlier retirement or unemployment. As surgery becomes safer and safer the timing of surgery will move earlier and earlier in the course of PD. Since the aim of surgery is to improve life quality and to maintain the patient in the habitual social and professional environment, it should not be denied to those patients because once the patient has lost job, social opportunity etc... even successful surgery at a late stage of disease may not been enough to return the patient to a more integrated position within the family, community and work. Since Surgery for PD is about allowing patient to lead life to the fullest, it is logical to propose surgery once the signs symptoms of the illness are incompatible with the patient's goals and aspirations.

Selected references:

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