

MOVEMENT DISORDER: BEYOND MEDICAL TREATMENT

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Medication, in conjunction with rehabilitative treatments such as physiotherapy, occupational therapy & even psychotherapy, is the prime therapy for movement disorders. As the condition advances, these techniques may fail or have unfavorable outcomes, necessitating surgery. In movement disorders such as essential tremor (ET), Parkinson's disease (PD), and dystonia, surgery has become a well-established type of treatment. A variety of surgical treatments such as resection, ablation, stimulation, cell therapy, gene therapy, immunotherapy and others have been utilized to manage cases with movement disorder. Currently deep brain stimulation (DBS), with its inherent character of adjustability and reversibility including strong advocacy and marketing from industry, is most common surgical procedure for PD, ET and dystonia. Radiofrequency thalamotomy and other ablative procedures are also performed in selected patients. DBS has complicated electrical effects on individual neurons and neuronal networks, affects neurotransmitter concentrations and dynamics, and shapes the microenvironment, which includes astrocytes, microglia, and endothelial cells. DBS also affects neuroplasticity and may cause neurogenesis and neuroprotection (Jakobs et al. 2019). We have started DBS surgery on 2017, and as of today have done seven cases. Among them five are patient of advanced PD and two were suffering from generalized dystonia. We have done bilateral STN DBS in four PD patient and unilateral VIM thalamus DBS in another case. Bilateral GPI DBS was done in both cases of generalized dystonia. Our results in all our cases are very much encouraging. We like to share our experiences and outcome in the presentation.

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