Physiotherapy post bilateral sub-thalamic nucleus deep brain stimulation in patients with Parkinsonism

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PD is a progressive neurologic condition that occurs due to significant loss of dopamine producing degeneration of both motor and non-motor basal ganglia circuitry. The literature used for this study suggests the Level I evidence for physiotherapy management of PD patients and it also emphasizes on a comprehensive client centered approach based on compensatory strategies to bypass the defective basal ganglia. DBS is an effective therapy for medication refractory symptoms of PD. It is indicated for movement disorders such as tremors, rigidity, bradykinesia, dyskinesia, dystonia, also hallucinations and depression although physiotherapy regime post-surgery is still lacking. For this purpose, a case series of 3 patients with idiopathic PD and similar criterion were considered appropriate. They were scored on ADL's H&Y scale and mean criterion for DBS. Post-surgical intervention, significant differences were seen bradykinesia and tremors, moderate difference in cognition but not in postural instability and rigidity. The study in mid stage supports the evidence although post 6 months of DBS - no specific physiotherapy protocol has been devised for the same. Also, the use of one-off auditory cues has been implemented to see its impact on functional mobility and balance confidence based on the auditory reaction time.

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