

Vestibular Stimulation: A Neuro-Physiological Intervention for Parkinson's Disease

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Dear Editor,

Parkinson disease (PD), is a chronic, progressive and the second most common neurodegenerative movement disorder, affects approximately 1% of the population by the age of 65 years, increasing to 4% to 5% of the population by the age of 85 years.^[1] There's no standard treatment for the disease – the treatment for each person with Parkinson's is based on his or her symptoms, but certainly with short term and long term side effects.^[2] Hence, it is much needed, to discover a natural therapy with minimum or less side effects to delay or prevent Parkinson's disease (PD). It was well know, that Dementia is a frequent and distressing complication of Parkinson's disease (PD) with a cumulative incidence. However, exact underlying cause for occurrence of dementia in PD is still a debate.^[3] Vestibular stimulation modulates cognitive processing, especially the spatial tasks, through its connections with hippocampus, neocortex, limbic system and HPA axis.^[4]

Direct connections exist between the vestibular system and basal ganglia.^[5] It was reported that, vestibular stimulation may improve motor deficits in PD.^[6] Interestingly, Vestibular dysfunction is more prevalent in Parkinson's disease.^[7] Hence, it naturally suggests the converse possibility that vestibular stimulation may prevent/delay Parkinson's disease.

Hence vestibular stimulation may be considered as neuro-physiological approach and a palliative therapy for the motor dysfunctions and cognitive impairment in Parkinson's disease, which is effective and with no or less side effects. It was reported that, dance a kind of vestibular stimulation (movement therapy) was helpful in the management of Parkinson's disease. However, it may be difficult for a Parkinson's patient to follow the task. Since many types of vestibular stimulation are available, it is important to observe the effective method of vestibular stimulation for management of Parkinson's disease (PD).

We have conducted animal and human research on cognition and vestibular stimulation. We have observed that vestibular system is connected with various brain structures which also have a role in PD. So it originated in our mind that vestibular stimulation may be applied for management of PD. We recommend researchers,

clinician's to start with translational research in this area for the benefit of Parkinson's patients.

CONFLICT OF INTEREST :

The authors declared no conflict of interest

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