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Articulatory kinematics and speech dysfunction in patients with Parkinson's disease

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Objective: Speech Impairment occurs in 60-89% in Parkinson's patients and little is known about as how it affects the different speech subsystems. In this communication, we report the articulatory kinematics and speech kinematics and speech dysfunctions in 12 consecutive Parkinson's patients in scale II and III of Hoehn and Yahr.

Methods: The cross-sectional study on 12 patients aged between 30 and 76 (10 males and 2 females: Hoehn and Yahr scale II and III) were analysed with Buffalo voice profile to identify laryngeal tone and tension, loudness, pitch and it breaks, diplophonia, resonance, nasa emissions, rate articulations tests were also done to study plosives, fricatives, affricatives, aspirates, glides, nasals and blens. Hoehn and Yahr scale IV and V Parkinson's patients were excluded, patients were video filmed in out Movement Disorder Clinic.

Results: 25% laryngeal tone abnormality, no vocal abuse, 50% loudness being too soft. Pitch was normal in 33% patients and phonation duration varied between 5-15 sec (normal being 20); overall speech disturbance was 50%. Eight percent had plosives error, 33% fricatives error, 8% had affricative error, 8% aspirates error, 8% glide, 8% nasal error and 50% had blends error.

Conclusion: This study highlighted the monotonous quality, laryngeal tone abnormality and loudness, abnormality associated with predominant articulation errors in blends and fricatives. This will help us in the quantitative analysis of the effectiveness of speech therapy in patients with Parkinson's disease.

Biography

S A Venkatesan serves as an Emeritus Professor at The Tamil Nadu Dr. M.G.R. Medical University; Former Adjunct Prof. IIT Madras and Visiting Professor at Cleveland – Ohio – USA; Hershey Medical College, USA. He has been rewarded with many national & international awards like AINA AWARD-Association of Indian Neurologists in America-2001. He has presented more than 60 papers in national conferences and 25 in international conferences. He has published works include 30 papers & 15 chapters.

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