

How Well Can a Person with Parkinson's Swallow?

Opinion

Parkinson's disease is a chronic, neurodegenerative movement disorder. Among the constellation of functional impairments occurring as a result of parkinson's disease, a scarcity of evidence presents itself when discussing dysphagia. Not only does it affect the physical well being of an individual, but also poses a threat to the social participation. The prevalence rate of dysphagia is high (4 out of every 5 patients) although swallowing difficulties are not frequently reported [1]. These can have grave consequences including pneumonia, malnutrition, dehydration, and mortality.

The possible mechanisms leading to dysphagia have been documented in literature. They can be summed up depending upon the phases of swallowing oropharyngeal bradykinesia and rigidity, incomplete cricopharyngeal relaxation, reduced cricopharyngeal opening, and delayed initiation of swallowing [2]. Other components comprise of limited excursion of mandible, tongue pumping, drooling, and incomplete laryngeal closure [3,4]. These are further complicated by additional cognitive impairment, upper extremity impairment, and impulsive feeding behavior observed in these individuals. At times, esophageal phase may reveal incomplete upper esophageal sphincter relaxation, impaired performance of supra hyoid muscles and hypertonic sphincter [5].

Although a wide array of management techniques have been emphasized over the years, no standardized program has yet been incorporated owing to the wide variation in symptomatology encountered in this group of individuals. Dysphagia therapy has been sub-grouped into surgical, pharmacological and rehabilitation treatments.

As part of the rehabilitation for swallowing difficulties, Baijens L et al. [2] noted the role of motor/behavioural exercises, voice training, verbal cueing, and bolus consistency change (foods that are moist and form a cohesive bolus) in a systematic review of literature. Motor exercises include active range of motion exercises for the tongue and lips, effortful swallow, supraglottic swallow, and Mendelsohn manoeuvre. Such a program not only improves swallow function, but improves the quality of life of an individual as well. Tjaden K [3] studied the effect of expiratory muscle strength training (EMST) along with compensatory methods like use of adapted utensils, slow rate of feeding, postural changes, and increasing sensory input for facilitation of swallowing in patients.

Also, the effectiveness of surface electrical stimulation (SES) was studied by Baijens et al. [6] where they found a difference on parameters among control and experimental group based on

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electrode position. Further an RCT was conducted by the same authors [7], although the results were not statistically significant.

A wide variety of rehabilitation therapies have been practiced for improving swallowing function in individuals with parkinson's disease. There is currently no concrete evidence to support or refute the efficacy of non-pharmacological swallowing therapy for dysphagia in parkinson's disease. Well-designed trials are in need to assess the effectiveness of swallowing therapy along with use of suitable outcome measures. Also, a follow up for at least 6 months is necessary to determine the long term effects of therapy.

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