

ORIGINAL ARTICLE

Swallowing Disorders in Parkinson's Disease[☆]



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Abstract

Introduction: Parkinson's disease is a type of chronic neurodegenerative pathology with a typical movement pattern, as well as different, less studied symptoms such as dysphagia. Disease-related disorders in efficacy or safety in the process of swallowing usually lead to malnutrition, dehydration or pneumonias.

The aim of this study was identifying and analyzing swallowing disorders in Parkinson's disease.

Subjects and methods: The initial sample consisted of 52 subjects with Parkinson's disease to whom the specific test for dysphagia SDQ was applied. Nineteen participants (36.5%) with some degree of dysphagia in the SDQ test were selected to be evaluated by volume-viscosity clinical exploration method and fibreoptic endoscopic evaluation of swallowing.

Results: Disorders in swallowing efficiency and safety were detected in 94.7% of the selected sample. With regards to efficiency, disorders were found in food transport (89.5%), insufficient labial closing (68.4%) and oral residues (47.4%), relating to duration of ingestion. Alterations in security were also observed: pharynx residues (52.7%), coughing (47.4%), penetration (31.64%), aspiration and decrease of SaO₂ (5.3%), relating to the diagnosis of respiratory pathology in the previous year.

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PALABRAS CLAVE

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Videoendoscopia
deglución

Conclusion: The SDQ test detected swallowing disorders in 36.5% of the subjects with Parkinson's disease. Disorders in swallowing efficiency and safety were demonstrated in 94.7% of this subset. Disorders of efficiency were more frequent than those of safety, establishing a relationship with greater time in ingestion and the appearance of respiratory pathology and pneumonias.

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Trastornos de la deglución en la enfermedad de Parkinson**Resumen**

Introducción: La enfermedad de Parkinson es una patología neurodegenerativa crónica, con síntomas motores característicos y otros menos estudiados como la disfagia. Suele relacionarse con desnutrición, deshidratación o neumonías por aspiración por trastornos en la eficacia y seguridad en la deglución.

El objetivo de este trabajo es identificar y analizar los trastornos deglutorios en la enfermedad de Parkinson.

Sujetos y métodos: Muestra inicial de 52 sujetos con enfermedad de Parkinson a los que se aplicó el test SDQ, específico para la disfagia. Se seleccionaron 19 (36,5%) participantes con algún grado de disfagia en dicho test para ser evaluados con el método de exploración clínica volumen-viscosidad y la videoendoscopia de la deglución.

Resultados: Se detectaron trastornos de eficacia y seguridad de la deglución en el 94,7%, siendo las alteraciones de la eficacia: dificultad en el transporte de alimento (89,5%), deglución fraccionada (78,9%), mal sello labial (68,4%) y residuos orales (47,4%), relacionándose con el tiempo que dura la ingesta. Se observaron también alteraciones en la seguridad como residuos faríngeos (52,7%), tos (47,4%), penetración (31,64%), aspiración y descenso de SaO₂ (5,3%), relacionándose con el diagnóstico de patología respiratoria en el último año.

Conclusiones: El test SDQ detectó trastornos deglutorios en el 36,5% de los pacientes con enfermedad de Parkinson. Las alteraciones en la eficacia y seguridad de la deglución se demostraron en el 94,7% de ellos, siendo más frecuentes los trastornos de eficacia que los de seguridad, estableciendo relación con el mayor tiempo en la ingesta y la aparición de patología respiratoria y neumonías.

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Introduction

Parkinson's disease (PD) is a chronic neurodegenerative pathology leading to progressive debilitation. It has been estimated that in Spain there are approximately 70 000 people suffering from the disease, with an incidence of 16/100 000 inhabitants/per year and a prevalence of 1000/100 000 inhabitants, but it is probable that these data have been underestimated.^{1,2}

The aetiology of PD is unknown although it is believed that a number of genetic and environmental factors are involved. The anatomical substrate is the progressive disappearance of dopamine neurones of the *locus niger*, the midbrain basal ganglia.³ Dopamine controls voluntary movement and postural balance, and its deficiency causes the gradual, inexorable development of the disease.² The beginning is insidious, with standard motor symptoms: tremor, bradykinesia and rigidity, together with other emotional, cognitive, sensitive, communicative symptoms and changes

in postural reflexes, which determine the Parkinson profile.⁴ Although PD is chronic and progressive there are replacement, electrophysiological and rehabilitation treatments which impede its evolution.^{5,6}

In Dysphagia Units swallowing disorders (SD) caused by neurodegenerative diseases are increasingly better controlled and the professionals involved are used to dealing with these patients. PD leads to SD in up to 90% of patients in advanced stages of the disease.^{7,8} However, the number of patients with PD who consult their doctor or speech therapist about dysphagia is limited and does not meet with expectations.

SD from PD have been described in all stages of swallowing and are manifold: limitations in transporting food to the mouth, difficulty in chewing, hypersalivation, inability to form a cohesive bolus, reduction in swallowing reflex, delayed and incomplete laryngeal closure, reduced pharyngeal and oesophageal peristalsis, and gastroesophageal reflux.^{7,9-12} Dysphagia may occur in any evolutive stage but

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