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ORIGINAL ARTICLE

Evaluation of dysphagia. Results after one year of incorporating videofluoroscopy into its study☆

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KEYWORDS
Dysphagia;
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Swallowing;
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Abstract
Introduction: Dysphagia is very common in children with neurological disabilities. These patients usually suffer from respiratory and nutritional problems. The videofluoroscopic swallowing study (VFSS) is the most recommended test to evaluate dysphagia, as it shows the real situation during swallowing.
Objectives: To analyse the results obtained in our centre after one year of the implementation of VFSS, the clinical improvement after confirmation, and the prescription of an individualised treatment for the patients affected.
Material and methods: VFSS performed in the previous were collected. The following variables were analysed: age, pathology, degree of neurological damage, oral and pharyngeal and/or oesophageal dysphagia and its severity, aspirations, prescribed treatment, and nutritional and respiratory improvement after diagnosis. A statistical analysis was performed using SPSS v21.
Results: A total of 61 VFSS were performed. Dysphagia was detected in more than 70%, being moderate-severe in 58%. Aspirations and/or penetrations were recorded in 59%, of which 50% were silent. Adapted diet was prescribed to 56%, and gastrostomy was performed on 13 (21%) patients. A statistical association was found between neurological disease and severity of dysphagia. The degree of motor impairment is related to the presence of aspirations. After VFSS

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evaluation and treatment adjustment, nutritional improvement was found in *Z*-score of weight (+0.3SD) and BMI (+0.4SD). There was respiratory improvement in 71% of patients with dysphagia being controlled in the Chest Diseases Department.
Conclusions: After implementation of VFSS, a high percentage of patients were diagnosed and benefited from a correct diagnosis and treatment. VFSS is a fundamental diagnostic test that should be included in paediatric centres as a diagnostic method for children with suspected dysphagia.

PALABRAS CLAVE
Disfagia;
Videofluoroscopia;
Deglución;
Aspiración;
Páralisis cerebral

Evaluación de la disfagia. Resultados tras un año de la incorporación de la videofluoroscopia en nuestro centro

Resumen
Introducción: La disfagia es muy frecuente en niños con discapacidad neurológica. Estos pacientes suelen presentar problemas respiratorios y nutricionales. El estudio de la deglución por videofluoroscopia (VFC) suele ser el más recomendado, ya que revela la situación real durante la deglución.
Objetivos: Estudiar los resultados obtenidos en la evaluación diagnóstica tras un año desde la implantación de la VFC en nuestro centro, y analizar la mejoría clínica tras la confirmación por VFC y la prescripción de un tratamiento individualizado en los niños con disfagia orofaríngea.
Material y métodos: Se recogen las VFC realizadas en el último año. Se analizan las siguientes variables: edad, enfermedad, grado de afectación neurológica, tipo de disfagia (oral, faríngea y/o esofágica), gravedad, aspiraciones y/o penetraciones, tratamiento prescrito y mejora nutricional y/o respiratoria tras el diagnóstico. Se realiza análisis estadístico mediante SPSS v21.
Resultados: Se realizaron 61 VFC. Se detectó disfagia en más del 70%, siendo moderadas-graves en el 58%. Se visualizaron aspiraciones y/o penetraciones en el 59%, siendo silentes el 50%. Se prescribió dieta adaptada al 56% y gastrostomía en 13 pacientes (21%). Se encontró asociación estadística entre enfermedad neurológica y la gravedad de la disfagia, existiendo relación según el grado de afectación motora y la presencia de aspiraciones. Tras la evaluación por VFC y la adecuación del tratamiento se encontró una mejoría nutricional en Z-score de peso (+0,3 DE) e IMC (+0,4 DE) y una mejoría respiratoria en un 71% de los pacientes disfágicos controlados en Neumología.
Conclusiones: Tras la implantación de la VFC se ha diagnosticado a un alto porcentaje de pacientes, que se han beneficiado de un diagnóstico y un tratamiento correctos. La VFC es una prueba diagnóstica fundamental que debería ser incluida en los centros pediátricos, como método diagnóstico de los niños con sospecha disfagia.

Introduction

Dysphagia is defined as difficulty swallowing solid or liquid foods, and varies in severity depending on the underlying disease of the patient. In the paediatric age group, it is usually a functional disorder due to abnormalities in the motor actions of swallowing in children with neurologic impairment.[1] Swallowing is a complex process that requires the coordination of the cranial nerves, brainstem and cortex as well as 26 muscles in the mouth, pharynx and oesophagus. Its function is the ingestion and transport of nutrients through the digestive tract as well as protection of the upper airway. Swallowing may be negatively affected by any abnormality in the nervous system or anatomical abnormalities in the mouth or pharynx. The action of swallowing can be divided into three stages: oral, pharyngeal and oesophageal. Thus, swallowing disorders can occur in any of these three stages and manifest clinically as dysphagia.[2,3]

The incidence of dysphagia may be as high as 80% in children with cerebral palsy and other developmental disorders, and dysphagia may lead to complications such as growth delay, recurrent respiratory infections, malnutrition, immune disorders, chronic disease and even death.[4,5] Most children with cerebral palsy have some degree of dysphagia, usually oropharyngeal.[6] Other health conditions may also cause oropharyngeal dysphagia, such as preterm birth, neuromuscular disorders, anatomical abnormalities of the oral cavity, orofacial surgery, presence of a feeding tube, mucositis and cardiorespiratory diseases, among others.[7] The conditions associated with oesophageal dysfunction are