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LETTERS TO THE EDITOR

Swallowing disorders and dysphagia in children

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Abstract

The role of the medical team in the evaluation of children with dysphagia goes way beyond the prescription of medical and nonmedical treatment and the evaluation of the possibility of oral feeding. Swallowing disorders in children may compromise growth and development with significant compromise to the child's general health, sometimes leading to multiple hospital admissions and diagnostic exams that expose the child to unnecessary risks, when ordered outside the context of a multidisciplinary approach. Most times dysphagia is multifactorial. Several pathologies a part from neurologic impairments may be involved as the main cause or a co-factor for swallowing disorders. Treatment may be medical, surgical or both, and some interventions may be needed even during follow-up due to consequences of long-term dysphagia. Specialists central to all multidisciplinary programs are: the otolaryngologist, the pneumologist, the gastroenterologist and the speech and language pathologist to ensure that evaluation of structural and functional aspects of the respiratory and digestive systems and its repercussions on the child's general health have been encountered and will be continuously accounted for. This letter hopes to bringing attention to the need of a detailed and specialized medical evaluation of these children before and continuously during diagnosis and rehabilitation of these children.

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Swallowing disorders and dysphagia in childhood

We congratulate the journal for the recent article “Multiprofessional work in pediatric dysphagia” published in this renowned journal Miranda et al¹. However, we need to clarify some aspects of dysphagia in childhood that we believe are crucial for understanding the work of professionals involved in caring for these children.

The role of the medical team working with children with swallowing disorders cannot be limited in any way, as described in the recently published article, to the indication of intervention by non-medical professionals, nor the prescription of medications or the identification of clinical conditions for feeding by orally¹. The evidence of the impacts on the airways and general health of these children is so evident that, in recent years, dozens of care centers for children with “aerodigestive” disorders were created in the United States, just after the proof that joint action of medical and non-medical professionals not only improves the quality of care provided to children with dysphagia, but is also more cost-effective².

Swallowing disorders in children lead to delay in development and growth with significant repercussions for the child's health, generating repeated hospitalizations and performing tests in an ineffective and even iatrogenic way when outside the context of a multidisciplinary assessment. Several pathologies can be responsible for swallowing disorders, some of which can be surgically corrected, in addition to neurological disorders and, in many cases, dysphagia is multifactorial, requiring different types of clinical and surgical approaches³.

The professionals considered the main pillars in the evaluation and follow-up of these children are: the otorhinolaryngologist, pulmonologist, gastroenterologist and the speech therapist², in addition, of course, the pediatrician, given the importance of structural and functional assessment of the airway and digestive tract and the repercussions on the child's general health. It is essential, for example, that common pathologies in this group of patients, such as gastroesophageal reflux disease, aspiration pneumonia, recurrent respiratory events and airway malformations, are identified and their impact minimized³. In addition, differential diagnoses with other less prevalent, but not negligible, pathologies are essential. It may also be necessary to work with a neuropsychiatrist, pediatric surgery, thoracic surgeon, geneticist and other non-medical specialties such as nursing, physiotherapy, psychology and nutrition.

The objective of the joint work is the global understanding of the problems to guide the rational request of complementary exams, minimizing interventions under anesthesia and radiation exposure. In addition, decision-making agreed between professionals facilitates communication with the family and adherence to necessary therapies and treatments. For this, it is important that each team member knows and recognizes the performance of the other and that they communicate continuously.

Dysphagia is any swallowing disorder that compromises nutrition or safety for oral feeding³. The disorder may be restricted to certain consistencies or not. Dysphagia in childhood is often a diagnostic challenge because breathing and swallowing have the same anatomical region in common and for breathing and swallowing to occur safely and effectively, promoting the child's growth and development, anatomical structures must be present, are intact and that, in addition to the anatomical integrity, there is also functional integrity with good coordination between these functions.

This coordination depends on a good functioning of the central nervous system (CNS). However, it is not uncommon for causes related to malformations of the digestive and respiratory tracts to occur, with or without associated neurological alterations. Airway malformations such as laryngomalacia, vocal fold paralysis, laryngeal cysts, laryngeal clefts, extrinsic tracheal compressions, tracheomalacia, among others, should be ruled out as well as the occurrence of tracheoesophageal fistulas. In addition to always being attentive to the coexistence of malformations, often associated, such as esophageal atresia and tracheomalacia⁴.

Thus, although a multiprofessional approach is essential for the management of dysphagia in childhood, it is imperative that the child is initially evaluated by the otorhinolaryngologist so that a physical examination of the airway and upper digestive tract is performed and the possibility of an anatomical and/or anatomic alteration is excluded, or functional in this region. This assessment should also guide basic guidelines regarding the safety of introducing food orally or any stimulus that increases salivation.

The initial clinical evaluation of the child with signs or suspicion of swallowing disorder should take into account the observation of the breathing pattern, signs of exertion and cough related to the swallowing of saliva, in addition to food. Observation during feeding also provides essential information allowing the assessment of tonic and coordination during swallowing, in addition to the presence of the cough reflex. In the case of children with neurological impairment, evaluation by the pediatrician and neuropsychiatrist is essential to clarify the diagnosis and potential prognosis, in addition to the related neuromuscular repercussions⁵.

The physical examination begins with the evaluation of the lips, oral cavity (oroscopy), mandible, but must necessarily cover the examination of the airway and upper digestive tract, which is performed through videoendoscopy with a flexible nasofibrolaryngoscope. This examination is performed by an otorhinolaryngologist, preferably with training and experience in the examination of neonates and infants. This exam allows, in a minimally invasive way, the evaluation of the airway from the nostrils to the larynx, passing through the pharynx. It is worth mentioning that alterations and malformations of the airway at any of these levels can have repercussions on swallowing, particularly in the neonate in the first weeks of life, so this

exam should be performed early. Videonasofibrolaryngoscopy is performed with the child awake, active and also makes it possible to diagnose changes in laryngeal mobility as well as the occurrence of incoordination, changes in sensitivity and the presence of salivary stasis.

Numerous studies have demonstrated that clinical assessment alone is not sensitive to diagnose aspiration events⁴. Videodeglutogram or videofluoroscopy is a dynamic radiography that is considered the gold standard to evaluate all phases of swallowing⁶ and video swallowing endoscopy (VED) is an endoscopic exam that evaluates well some phases of swallowing and especially the anatomical structures. These tests are complementary, however, they have indications that depend on the ingestion of barium contrast in the case of videofluoroscopy and on the tolerance of the passage of the optical fiber through the nostril in the case of VED. The decision for one or the other and the order in which they will be performed therefore depend on a case-by-case discussion usually involving the otolaryngologist and the speech therapist.

This letter aims to reinforce the importance of the multidisciplinary team, but mainly to remember that the diagnosis of swallowing disorder must essentially pass through medical specialists who know how to evaluate the child's airway

and upper digestive tract before starting therapies and who accompany them. Communication between teams must be continuous from the precise diagnosis and follow-up, aiming to prioritize actions and rationalize the exams to be requested that may be relevant for the full development of the child, always considering their risks and benefits.

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