

## Foreign Body Aspiration in Children-A Retrospective Study from a Tertiary Care Center in Northern Portugal

Margarida Moreno Fernandes<sup>1\*</sup>, Mariana Neto<sup>1</sup>, Andreia Preda<sup>1</sup>, Mariana Sá Pinto<sup>1</sup>, Sofia Neves<sup>2</sup>, José Almeida<sup>2</sup> and Isabel Carvalho<sup>1</sup>

<sup>1</sup>Department of Pediatrics, Unidade Local de Saúde Gaia/Espinho, Vila Nova de Gaia, Portugal

<sup>2</sup>Department of Pulmonology, Unidade Local de Saúde Gaia/Espinho, Vila Nova de Gaia, Portugal

\***Corresponding author:** Margarida Moreno Fernandes, Department of Pediatrics, Unidade Local de Saúde Gaia/Espinho, Vila Nova de Gaia, Portugal

**Citation:** Fernandes MM, Neto M, Preda A, Pinto MS, Neves S, Almeida J and Carvalho I. (2024) Foreign Body Aspiration in Children – A Retrospective Study from a Tertiary Care Center in Northern Portugal. *Adv Clin Med Res.* 5(2):1-4.

**Copyright**© 2024 by Fernandes MM, et al. All rights reserved. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

**Received:** February 05, 2024 | **Published:** March 05, 2024

### Introduction

Foreign body aspiration remains a significant cause of preventable deaths in children and a diagnosis where a high index of suspicion is needed. The first goal of our retrospective study was to define the importance of valuing medical history, especially parental suspicion of foreign body aspiration in children. The second goal was to characterize the time from the onset of symptoms to bronchoscopy and the confirmation of a foreign body in this examination.

We analyzed the medical records of the cases of suspected foreign body aspirations over the last 10 years in a tertiary Hospital in Northern Portugal, one of the three hospitals responsible for receiving these children in the north of Portugal. A total of 30 children were included, 70% of whom were male with the average age of 3,6 years old.

The most common symptoms were coughing, choking sensation, difficulty breathing and wheezing. Less common symptoms included cyanosis, vomiting, rhinorrhea, desaturation, loss of consciousness, asthenia, hoarseness, and fever. In the majority of cases (93,3%), parents considered foreign body aspiration as a possibility, which was confirmed in 70%. This was most often asked parents in the

beginning of the clinical interview.

Chest X-rays were normal in 25% of the foreign body aspiration cases, and bronchoscopy detected the foreign body afterwards. The foreign body was found in 73.3% of the bronchoscopies performed. The most common foreign bodies were vegetables, pen caps and nuts and the most common location was the intermediate trunk. Bronchoscopy complications from bronchoscopy were found in 11,1% of cases. Most cases (63.3%) had cultural examinations of the bronchial lavage but these were positive in only two cases, *Haemophilus influenzae*, *Pseudomonas aeruginosa* and *Streptococcus pneumoniae* [1-4].

In our study 46.7% of the children had treatment with antibiotics and 46.7% were started on systemic corticosteroid, with 33.3% of children having been treated with both. In the majority of cases (62.1%) there was no need to repeat the bronchoscopy. Only 37.9% of children required a repeat, mostly because it was difficult to remove the foreign body or because there was a lot of granulations. The majority (36.4%) was normal and secretions were found in 18.2%.

The diagnosis is not straightforward as the manifestations are nonspecific, as confirmed by our data. For example, 73,3% of children presented with cough, 46,7% with difficulty breathing and 33,3% with wheezing, symptoms that are very common in the Emergency Department. A high index of suspicion is therefore necessary. An early diagnosis is the most important predictor factor of good prognosis, in order to prevent complications. It's important to ask whether any adult witnessed the choking event. At the time of admission, there may be asymptomatic patients and the diagnosis should be promptly suspected and a bronchoscopy should be requested. Parents should be informed about prevention of choking and when children should go to the Emergency Department, in order to avoid preventable child deaths.

## References

1. Rovin JD, Rodgers BM. (2000) Pediatric foreign body aspiration. *Pediatr Rev.* 21:86.
2. Shlizerman L, Mazzawi S, Rakover Y, Ashkenazi D. (2010) Foreign body aspiration in children:the effects of delayed diagnosis. *Am J Otolaryngol.* 31(5):320-24.
3. Salih A, Alfaki M, Alam-Elhuda D. (2016) Airway foreign bodies: A critical review for a common pediatric emergency. *World J Emerg Med.* 7(1):5–12.
4. Sultan T, van As A. (2016) Review of tracheobronchial foreign body aspiration in the South African paediatric age group. *World J Emerg Med.* 7(1):5–12