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

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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
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