Aspiration of a cockroach
Aspiração de barata

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ABSTRACT
It is described a five-month-old infant admitted to our pediatric intensive care unit who aspirated a cockroach. The cockroach was removed through bronchoscopy. The child arrived at the emergency room in cardiopulmonary arrest and despite full respiratory and cardiovascular support was discharged with evidence of severe neurological sequelae. It is known that this is the first case of a cockroach aspiration in a five-month-old infant and reinforces that aspiration of an insect must be considered a possibility in patients with an unidentified organic foreign body aspiration.

Keywords: Foreign bodies; Respiratory aspiration; Respiratory insufficiency; Child; Insect; Case reports

INTRODUCTION
Foreign body aspiration is a very common condition in young children and can lead to significant morbidity and mortality. The pediatric age group corresponds to 75% of cases, with a peak incidence of 48% occurring on the second year of age¹. Sixty-five percent of deaths occur in children below three years². Therefore, it is imperative to establish an early suspicion in order to rapidly initiate the proper therapy and avoid potential damages to the airways.

Various types of foreign bodies have been reported including food residues, toy parts, needles, plastic spoons and fishing weights²⁻³. Aspiration of insects or insect parts is very rarely reported. It was found three cases of cockroach aspiration⁴⁻⁶ and one case of wasp aspiration⁷ in the Medline database. It is described a five-month-old child, admitted to our pediatric intensive care unit, who aspirated a cockroach.

CASE REPORT
It is described a five-month-old male child who, according to the mother, was placed over a small carpet while she was preparing his bath. After approximately one minute the mother noticed that the child was coughing and observed a dark object in his mouth. While trying to remove this object with her hands the mother was only able to extract two small parts recognized as being insect legs, probably of a cockroach. After almost five minutes trying to remove the insect from the child’s mouth the patient became cyanotic, hypotonic and with respiratory distress. At this point, the mother started to administer mouth-to-mouth ventilation. The child was taken to the emergency room, where he presented respiratory insufficiency, wheezing and markedly reduced breath sounds. The chest X-ray revealed left lung atelectasis. Shortly after arrival, the child presented cardiopulmonary arrest which lasted approximately 15 minutes.

After resuscitation he was transferred to our intensive care unit. Apart from the respiratory and...
circulatory support he was submitted to a bronchoscopy for removal of the suspected insect. The presence of a cockroach was confirmed and it was located at the distal carina (Figure 1). After removing the cockroach, it was possible to discontinue all intensive care support and the child was discharged on the tenth day of admission. Unfortunately, at discharge, the child presented clinical evidence of severe neurological sequelae.

![Endoscopic view of the cockroach in the distal carina](image)

**DISCUSSION**

The incidence of foreign body aspiration (FBA) varies with age, sex and geographical location. Foreign body aspiration is more common in boys with a 1.7:1 ratio and severe cases are frequently seen in young infants. This was the case of the patient in this study.

Clinical presentation is variable, but the most common symptom is the so-called “penetration syndrome”, which is a sudden episode of choking and coughing. The present case had a clinical syndrome which closely resembled the penetration syndrome.

The radiological findings of this case are consistent with those found in a typical FBA, except that the right lung is more frequently affected than the left lung. Additionally, no particular radiological finding has a clear correlation with the type of foreign body involved, if the object is not radiopaque.

Van Looij et al., in a retrospective study, described their experience with foreign body removal in children aged under three years. They found that the foreign bodies were most frequently located in the upper respiratory tract at the larynx and proximal trachea. However, when the foreign body migrated to the lower respiratory tract, there was no predominance between right and left bronchi for children younger than three years. Above this age group, the right bronchus is predominant. In the present case, as would be expected due to the size of the patient and the size of the cockroach, the foreign body was located in the carina.

Baharloo et al. report the frequency and type of foreign body removed from 63 children. They recovered an organic foreign body in 91% of patients. More than half of the aspirated foreign bodies were peanuts followed by walnuts, carrots and apple. There were no cases of insect aspiration. Reviewing the Medline database it was found four cases of insect aspiration. Of these, two cases were described in India, one in South Carolina, which was related to cockroach aspiration. One of these patients remained with the cockroach in the lower right lobe for two years. The fourth insect aspiration case was due to a wasp.

This case is probably the first case of cockroach aspiration in a five-month-old infant and reinforces that aspiration of an insect must be considered a possibility in patients with an unidentified organic foreign body aspiration.

**REFERENCES**