
Case report

Food allergy masquerading as foreign body obstruction

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Background: Allergic reactions to peanut and tree nuts can present as upper airway obstruction.

Objective: To increase awareness that food allergy should be considered in the differential diagnosis of upper airway obstruction in children.

Methods: We report an allergic reaction to cashew that was initially misdiagnosed as foreign body aspiration.

Results: When the presenting signs and symptoms of food allergy are limited to upper airway obstruction, they can be confused with foreign body aspiration.

Conclusions: As peanuts and tree nuts are common causes of both food allergy and foreign body aspiration in children, both of these diagnoses should be considered in the differential diagnosis of airway obstruction.

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INTRODUCTION

Accurate diagnosis of food allergy is important so that appropriate treatment can be started promptly and measures can be taken to prevent future exposures to the offending food. As peanuts and tree nuts are common causes of both food allergies and foreign body aspiration in children, confusion can arise when the presenting signs and symptoms of food allergy are limited to upper airway obstruction. We report a case of an allergic reaction to cashew in a young male who presented with signs and symptoms of upper airway obstruction and was initially misdiagnosed as a foreign body aspiration.

CASE REPORT

A 21-month-old boy presented to the emergency room with abrupt onset of cough and stridor after ingesting some cashews. Physical examination showed stable vital signs with a heart rate of 110 beats per minute, blood pressure of 100/60 mm Hg, and respiratory rate of 28 breaths per minute. A general examination revealed a pleasant boy in no apparent respiratory distress. There was evidence of stridor on auscultation, but no wheezing or other adventitious sounds. There were no other abnormalities noted on the physical examination, including any evidence of urticaria or rashes. Continuous oxygen monitoring showed 97 to 99% saturation on room air. A lateral neck and anterior-posterior chest x-ray did not show opacities in the airway, atelectasis, or air trapping. The

patient was admitted to the pediatrics intensive care unit with the presumptive diagnosis of foreign body aspiration.

Although foreign body aspiration was suspected, the patient did not undergo bronchoscopy because his stridor and cough gradually improved. After an overnight observation in the pediatrics intensive care unit, he was discharged to home the next day with a diagnosis of foreign body aspiration, with spontaneous resolution.

One year later, he developed cough, stridor, and hives after eating some cashews. This time, his symptoms resolved with diphenhydramine given at home so he was not taken to the emergency room. One month later, he was evaluated in the allergy and immunology clinic. Prick skin testing with cashew extract was positive (Table 1). The patient's mother was advised to exclude cashews and other nuts from the diet. She was also given an epinephrine autoinjector (Epipen Jr, Dey, Napa, CA) for use in case of accidental ingestion of cashews.

DISCUSSION

Peanut and tree nuts are both common causes of food allergy and foreign body aspiration in children. As illustrated by the case presented, both can present with similar clinical findings (Table 2), so the history can be confusing. This is especially true when the presenting signs and symptoms of food allergy are limited to upper airway obstruction, and without accom-

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Table 1. Prick Skin Test Results

Allergen	Wheal	Flare
Cashews	5 mm	3.2 cm
Histamine	4 mm	2.9 cm
Diluent	0 mm	0 mm

Table 2. Clinical Findings Associated with Food Allergy vs Foreign Body Ingestion

Clinical findings	Food allergy	Foreign body
Cough	+	+
Stridor	+	+
Wheeze	+	+
Shortness of breath	+	+
Hypotension	+	—
Rhinitis	+	+/-
Urticaria, angioedema	+	—
Nausea and vomiting	+	+/-

panying signs and symptoms that are generally recognized as indicators of food allergy, such as rhinitis, urticaria, abdominal pain, or hypotension. In the case presented, the clinical evidence suggests that the first episode of airway obstruction was attributable to an allergic reaction to cashew and not foreign body obstruction. Although nut allergy was not documented at the time, this is a more likely explanation because the airway obstruction gradually and spontaneously resolved; subsequently, the patient experienced a more typical allergic reaction and positive skin test to cashew.

One reason that food allergy may not be included in the differential diagnosis of upper airway obstruction is because this possibility has not been emphasized in the general pediatric literature. In a review of the pediatric texts,¹⁻⁵ foreign body aspiration was considered an important cause of upper airway obstruction in children, yet only two of these textbooks^{2,3} briefly mentioned food allergy in the differential diagnosis of upper airway obstruction.

CONCLUSION

Food allergy and foreign body aspiration can have similar clinical presentations. Accurate diagnosis is important for providing proper treatment, avoidance of unnecessary hospitalization and procedures, and implementing preventive measures, including exclusion diets and epinephrine. Because peanuts and tree nuts are both common causes of food allergy and foreign body aspiration in children, both of these diagnoses should be considered in the differential diagnosis of upper airway obstruction.

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