

Upper Airway Aspiration of a Chicken Bone in an Infant

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Abstract

Asphyxia due to aspiration of a foreign body is a major cause of accidental death in children. The airway obstruction can be caused by food objects, such as sausages, nuts, candies, grapes, and seeds, or non-food objects, such as balloons or coins. We describe a 10-month-old child in whom a small Y-shaped chicken bone lodged in the larynx. The case was initially misdiagnosed as croup because on the radiograph, the foreign body could not be distinguished from the normal bony structures. Furthermore, the mother did not report a choking episode. Emergency physicians should be aware that in cases of aspiration of small chicken bones in the pediatric age group, even a careful history may sometimes be misleading and the object could be overlooked on radiographic examination.

MeSH Words: Foreign body, aspiration, chicken bone, airway obstruction

Introduction

In children, asphyxia due to aspiration of a foreign body is a major cause of accidental death. We describe a 10-month-old child in whom a small chicken bone lodged in the upper respiratory tract and emphasize the pitfalls in reaching the correct diagnosis.

Case Report

A 10-month-old girl with an unremarkable medical history presented to the pediatric Emergency Department (ED) of a major tertiary medical center with sudden onset of coughing. Her mother reported that the symptom had begun soon after she fed the child a chicken-and-vegetables dinner; she did not describe an

episode of choking. Physical examination revealed minimal respiratory distress with stridor. Oxygen saturation measured 99% in room air; respiratory rate 34 breaths per minute; heart rate 185 beats per minute; blood pressure 90/74 mmHg; and tympanic temperature 36.5°C. Anteroposterior and lateral cervical x-ray films taken in the ED were initially interpreted as normal. A diagnosis of croup was suspected. However, further review of the lateral cervical radiograph revealed a Y-shaped laryngeal foreign body in the supraglottic region (Figure 1). The patient was transferred to the operating room where rigid bronchoscopy was performed. A thin chicken bone, 22 mm in length, was found to be lodged in the larynx and was removed. The child recovered completely within a few hours.

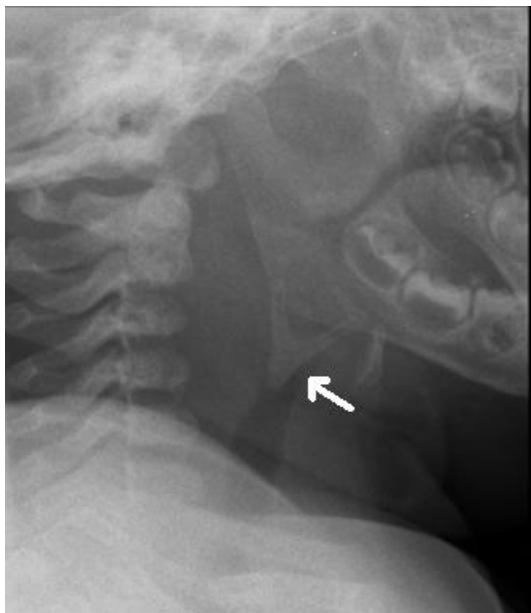


Figure 1. Y-shaped chicken bone in the supraglottic region of the larynx.

Discussion

Foreign body aspiration is a common pediatric respiratory emergency event, especially in the 1-3-year age group [1-3]. The most common items aspirated are small or smooth food objects, such as nuts, raisins, sunflower seeds, improperly chewed pieces of meat, grapes, and sausages, and non-food objects, such as balloons and coins [2, 3]. An estimated 80% of aspirated foreign bodies are radiolucent [4]. Most patients present with a definite history of foreign body aspiration [4]. An episode of choking or coughing, reported in 95% of cases, is the most reliable predictor; stridor is common when the foreign body is lodged in the upper airway [5]. A review of 1160 cases of foreign body aspiration in children demonstrated that laryngotracheal foreign bodies were relatively uncommon and were frequently misdiagnosed as croup [4].

In agreement with the literature [3-5], our case demonstrates that a foreign body lodged in the upper airway can be easily missed or misdiagnosed. The x-rays were the main source of the confusion, because the radiographic characteristics of the foreign body, a small chicken bone, resembled those of the normal anatomic bony structures.

Furthermore, this report demonstrates that even a careful history may sometimes be misleading. In children with a history of sudden onset of

coughing or choking during feeding, a diagnosis of foreign body aspiration should be considered until proven otherwise. However, in our case, the mother did not report an episode of choking, but rather of coughing that began after feeding. When the history is not clearly suggestive, x-ray examination in the ED may be helpful (such as in this patient), but the findings must be carefully reviewed.

It is important that emergency medicine physicians be aware of the risk of misdiagnosis of upper airway aspiration of a foreign body in young children.

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