

The “Tooth” About Wheezing



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A 6-year-old previously healthy nonatopic Caucasian female patient presented to the allergist with a 1-month history of cough. The cough started during a viral upper respiratory infection but progressed to include wheezing and cough. There were no other reported health or environmental changes. A chest x-ray showed “Minimal peribronchial thickening. No evidence of pneumonia or air trapping,” and she was treated with azithromycin, prednisolone, and levalbuterol for 5 days. Her symptoms improved after 5 days, but within 2 weeks, the cough and wheezing had returned and was exacerbated by exercise and talking. She was prescribed a second course of prednisolone and started on fluticasone/salmeterol 100/50 mcg, with minimal improvement. Sinusitis was suspected and she completed a 3-week course of amoxicillin/clavulanic acid. Her wheezing resolved, and the cough slowly improved but did not completely resolve. She and her mother reported a variable clinical response to bronchodilators. Asthma, vocal cord dysfunction, gastroesophageal reflux, and foreign body aspiration were considered. She was referred to Speech Therapy and Pulmonology.

Two days before her Pulmonology appointment, she had a coughing fit and post-tussive emesis. In the vomited phlegm, her mother noticed a small tooth. In retrospect, they recalled that just before the onset of her cough, she had lost a tooth and had gasped when it fell out. They never found the tooth and thought she had swallowed it. On further review of the chest x-ray performed at the onset of her cough, the tooth can actually be seen (Figure 1, arrow). Her pediatrician had ordered the x-ray to look for the foreign body after the patient was brought into the clinic shortly after losing her tooth. However, the pediatrician had not specifically mentioned the possibility of aspiration in the radiology requisition, and the foreign body was missed.

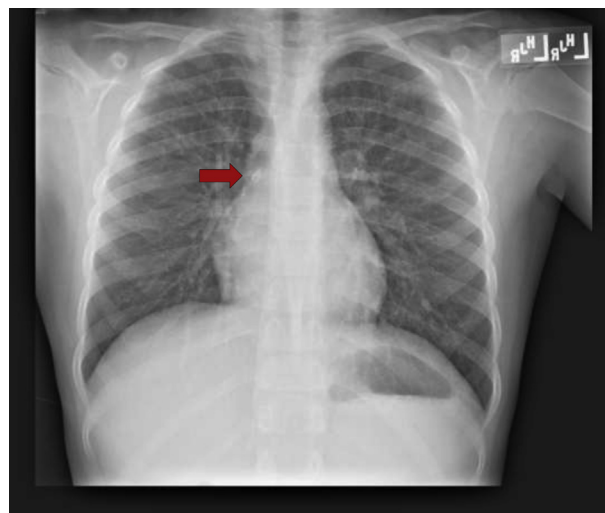


FIGURE 1. An anterior-posterior chest x-ray performed during the first week after the child developed a cough. The arrow points to a deciduous tooth lodged in what appears to be the right mainstem bronchus. This finding was missed during the initial read in which the only accompanying history was “wheeze.”

Wheezing is a frequent finding in the pediatric patient. Asthma is one of the most common chronic diseases of childhood, affecting more than 6 million children in the United States.¹ This case reminds us that not all that wheezes is asthma. When the clinical history does not match an expected course, such as the acute onset of wheezing in a nonatopic, previously healthy 6-year-old, which persists despite several courses of corticosteroids, bronchodilators, and antibiotics, the differential diagnosis should be expanded. In the United States, over 17,000 cases of foreign body aspiration have been reported annually.² Nuts, seeds, and other foods were the most commonly reported objects aspirated, followed by inorganic items such as toys or magnets.³ Most patients who aspirate foreign bodies are below the age of 3 years and there is a slight male predominance.⁴ Nonspecific symptoms are not unusual and can lead to delayed or mistaken diagnoses.⁵ Radiographic modalities used for the investigation of foreign body aspiration include plain chest radiographs, fluoroscopy, and CT. However, chest radiographs are often normal and bronchoscopy should be undertaken if a foreign body is suspected.⁶ Sticking with the family through a frustrating diagnostic dilemma benefits both the patient and the clinician. In most cases, the “tooth” eventually comes out!

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