

Foreign body aspiration in children

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1 In Canada, choking or suffocation accounts for about 40% of unintentional deaths among children younger than 1 year¹

Round and cylindrical food or other foreign bodies (e.g., hot dogs, sausages, grapes, marbles) pose the greatest risk. Uninflated balloons are hazardous owing to their ability to form a complete seal of the airway.¹

2 Foreign body aspiration can result in either partial or complete airway obstruction

Cyanosis, respiratory distress and inability to speak or cough are signals of complete obstruction and should be managed with back blows (for children aged < 1 yr) and the Heimlich manoeuvre (for children aged > 1 yr).² In a patient with a partial obstruction (sudden onset of coughing, gagging or dyspnea), first aid efforts should be avoided unless signs of complete obstruction arise.² In both instances, blind finger sweeps should be avoided and emergency medical services should be contacted.²

3 Findings of physical examination are variable and chest radiographs are normal in 30%–50% of patients with foreign body aspiration confirmed by endoscopy³

Clinicians should obtain anterior–posterior and lateral radiographs during inspiration and expiration.³ Radiolucent foreign bodies — including plastic, aluminum, glass and organic materials — will not appear on radiographs.³ Positive findings on radiographs include air trapping and atelectasis.³ If findings of physical examination and radiography are inconclusive, a foreign body may still be present.

4 Aspiration of batteries, peanuts and sharp objects warrants urgent consultation for surgical management⁴

Batteries can erode the respiratory mucosa, while peanuts release oils that induce substantial bronchial inflammation. Sharp objects (e.g., bones, safety pins, needles) can cause perforation and migrate to surrounding structures, causing further injuries.⁴

5 Rigid bronchoscopy is the gold standard for diagnosis and intervention⁵

Rigid bronchoscopes allow for optimal visualization and ventilation, as well as the ability to use larger instruments.⁵ Flexible bronchoscopy may be useful for certain foreign bodies that are located in the peripheral airways.

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