

Esophageal Impaction Presenting as an Airway Foreign Body

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Background

Airway foreign bodies are a leading cause of morbidity and mortality in young children, with food particles being the most common culprits [1]. Tracheal compression caused by esophageal impaction, however, is a less frequent but potentially life-threatening condition [2]. While esophageal food impactions are often associated with underlying conditions such as eosinophilic esophagitis and strictures [3], this case is notable for significant airway compromise despite the absence of predisposing factors. The dual involvement of the airway and esophagus in this case highlights the complexity of managing pediatric foreign body obstructions and the importance of prompt, multidisciplinary intervention.

Clinical Case

A 13-month-old male with no previous medical history presented to an outside emergency department in respiratory distress following a witnessed choking incident on a chicken nugget. Examination revealed significant stridor, increased work of breathing, and oxygen saturation in the 90s on 2L of oxygen. Chest X-ray showed no radiolucent foreign bodies or infiltrates. Treatment with dexamethasone and racemic epinephrine led to mild improvement. Flexible laryngoscopy at the outside institution was unremarkable. He was transferred to our institution for his worsening clinical picture.

Upon arrival, he exhibited severe respiratory distress, retractions, biphasic stridor, hypoxia, and a frequent cough, with his oxygen saturation dropping to the mid-80s at its lowest. Because of suspected foreign body obstruction, ENT consultation recommended airway endoscopy. Prior to surgery, he became lethargic, and blood gases indicated hypercarbia with impending respiratory failure.

Rigid bronchoscopy revealed significant mass effect compressing the lateral upper and mid-trachea (Figure 1). Esophagoscopy confirmed a large food impaction (Figure 2). ENT removed most of the chicken nugget, and Gastroenterology cleared the remaining portion from the distal esophagus. Bronchoscopy at the conclusion of the case confirmed complete resolution of tracheal compression (Figure 3). Esophageal biopsies were negative for eosinophilic esophagitis. The child was safely extubated at the end of the case and discharged the next day with complete resolution of all symptoms.



Figure 1: Tracheoscopy showing airway compression caused by esophageal food impaction

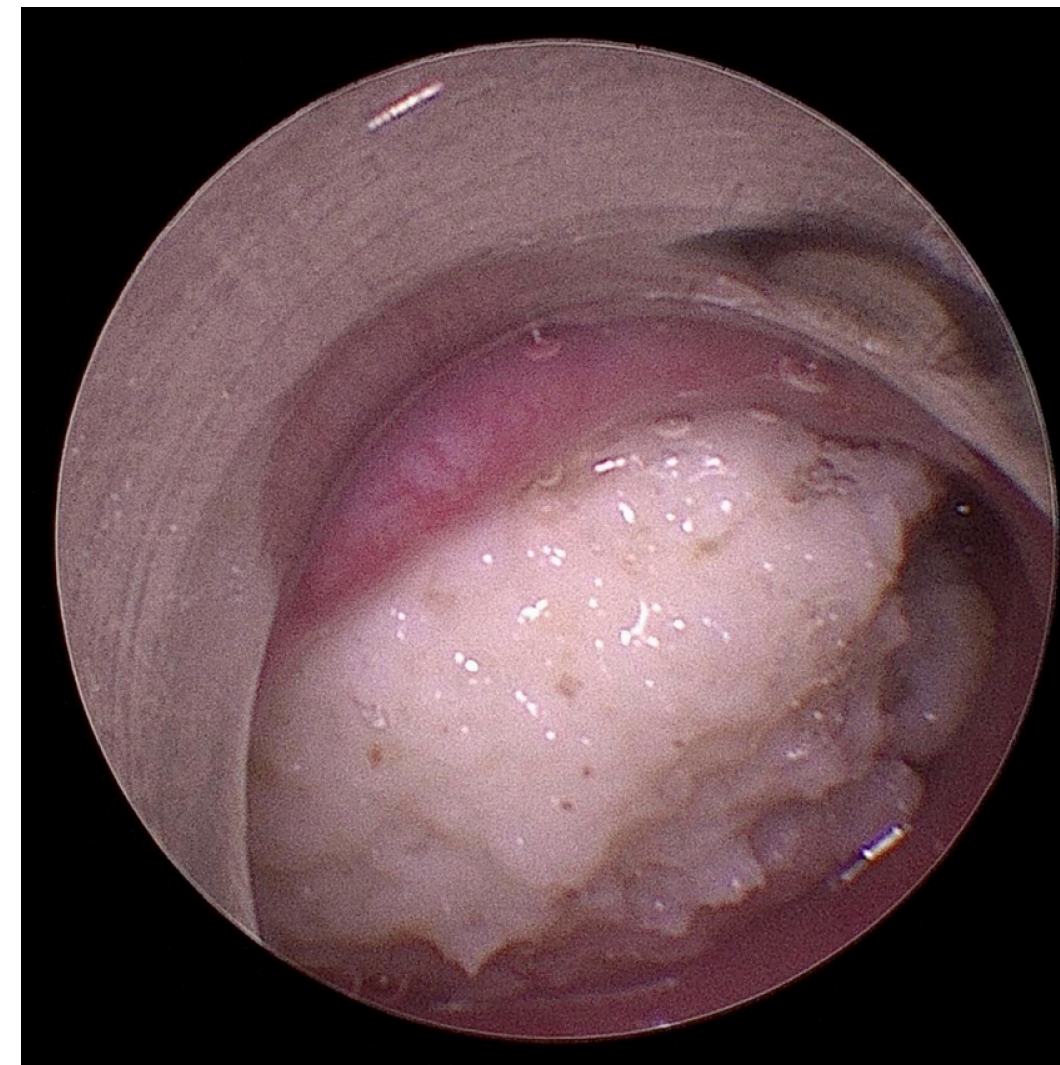


Figure 2: Esophagoscopy showing food impaction



Figure 3: Tracheoscopy showing reversal of airway compromise upon removal of food impaction

Conclusion

This case underscores the need for heightened clinical vigilance in children presenting with choking, even when initial imaging and endoscopic findings are unremarkable. The rapid progression to severe respiratory distress and hypercarbia, secondary to tracheal compression from an esophageal food impaction, illustrates the importance of considering esophageal pathology in cases of airway obstruction. Prompt recognition and coordinated intervention between ENT and Gastroenterology were crucial in preventing further deterioration and achieving a successful outcome.

References

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