

Esophageal Foreign Body Presenting As Respiratory Distress

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Citation

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Abstract

Aerodigestive tract foreign bodies are common place occurrences in paediatric population and impose diagnostic and therapeutic challenge for otolaryngologists. Several mechanisms have been proposed to explain respiratory symptoms secondary to esophageal foreign bodies. Authors are reporting a case of respiratory stridor in a one year old child resulting from sharp penetrating foreign body in cricopharyngeal area.

INTRODUCTION

Toddlers and young children are naturally inclined toward oral exploration of their environment, thus making aerodigestive tract foreign bodies as potentially serious cause of mortality and morbidity in children. Esophageal foreign bodies may threaten already narrowed airway of children in many ways, but sharp foreign body penetrating through posterior lamina of cricoid cartilage thus causing respiratory difficulty is an uncommon phenomenon.

CASE REPORT

A one year old male child was admitted to paediatrics department with history of sudden onset of respiratory difficulty, noisy respiration (biphasic stridor), and difficulty in swallowing for the last 5 days. There were no associated symptoms of fever and cough. Treatment was started on the lines of laryngotracheobronchitis with nebulized epinephrine. Lateral and antero-posterior radiographs of neck revealed a radiopaque foreign body at upper end of oesophagus, one end of which was penetrating through posterior lamina of cricoid cartilage thus projecting in subglottis (figure 1). Rigid endoscopic removal under general anesthesia was planned. Tracheostomy had to perform prior to endoscopy as laryngeal inlet was barely visible for intubation. Rigid esophagoscope was introduced and foreign body was taken inside the lumen and removed. The patient had an uneventful post operative period and was successfully decannulated without any respiratory complaints.

Figure 1

Figure 1 Lateral view shows sharp metallic foreign body in upper esophagus with one end projecting in subglottis.



DISCUSSION

Children between the ages of 1 to 3 years are the prevailing victims of aerodigestive tract foreign bodies for a number of reasons: toddlers explore their environment by oral tactile means; have sparse dentition, which morselizes food poorly; lack of cognitive ability to distinguish edible objects from inedible, and are prone to distraction and engaging in play while eating. Coins are by far the most commonly ingested objects. Food products are the second most common, remaining percentage is made up of buttons, and other plastic items, marbles, crayons, batteries, screws, pins. ¹

Most foreign bodies are expelled spontaneously via protective reflexes (coughing or regurgitation) or pass uneventfully through the alimentary tract. Yet a significant percentage get impacted at esophageal inlet; the narrowest part of upper gastrointestinal tract. ¹ In paediatric series, 63% to 84% of foreign bodies are retained at the level of cricopharyngeal muscle. ² Commonest presenting symptoms are excessive drooling, poor feeding, dysphagia and vomiting and occasionally cough, stridor and wheezing. ³

Respiratory symptoms secondary to esophageal foreign bodies attribute to sharp, irregular & large size and longer duration of impaction. Proximity of cricopharyngeal area to the larynx and trachea is likely to cause respiratory symptoms. ⁴ Cough and stridor may results from direct pressure on the membranous posterior tracheal wall by the foreign body itself or by secondary esophageal dilatation, resulting in narrowing of the trachea. Long standing foreign bodies may lead to periesophageal inflammation or may imbed in the wall of esophagus producing a foreign body granulomas resulting in compression of the trachea and stridor. ⁵ Vocal cord paralysis secondary to impacted

esophageal foreign body producing respiratory symptoms has also been reported in the literature. Sharp & retained esophageal foreign bodies may produce severe complications including esophageal diverticulum, lobar atelectasis, mediastinitis, aorto-esophageal fistula and bronchoesophageal fistula. ⁶ The foreign body may even pass through the acquired tracheoesophageal fistula and obstruct the airway. ⁵ Sharp foreign body penetrating posterior lamina of cricoid cartilage thus producing stridor is a rare phenomenon as described in our report.

CONCLUSION

Atypical symptoms pose a diagnostic difficulty in esophageal foreign bodies. Clinical suspicion remains most important diagnostic tool favoured by radiological investigations. Rigid endoscopic examination is essential for diagnosis and successful management of sharp foreign bodies esophagus.

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