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Introduction:

Establishing the type of foreign body and the level of its impaction prior to induction is critical for choosing a safe anesthetic approach in a child. We present the case of a swallowed foreign body which became lodged in the upper esophagus with near complete laryngeal compression.

Case Description:

An otherwise healthy 16-month-old female was found coughing and drooling with a large metal clip missing from the family kitchen. She was assumed to have swallowed it and was taken to the local emergency room where an x-ray confirmed a 3 cm metal clip lodged in the upper esophagus. An intravenous catheter was placed and the child was transferred to the pediatric hospital where she was taken to the operating room emergently for "esophageal foreign body removal". After reviewing the x-ray, the location of the foreign body was found to be hypopharyngeal and the anesthetic approach for an airway foreign body was chosen. The patient was premedicated with IV midazolam and underwent induction with sevoflurane, which was later transitioned to intravenous dexmedetomidine and propofol infusions. With repeated careful laryngoscopy, the patient's pharynx and larynx were progressively topicalized with lidocaine. Under spontaneous respiration, laryngoscopy was performed by the surgical team. The body of the metal clip was in the upper esophagus, one flange was nearly completely compressing the patient's larynx from posteriorly while the other flange had penetrated the posterior hypopharynx. A laparoscopic grasper was used to pinch the clip closed and then extract it. Further examination revealed only a small injury to the posterior pharynx. The patient was transported to the ICU extubated and had an uneventful recovery. She was discharged home on post-op day 6.

Discussion:

There remains considerable debate as to whether spontaneous or controlled ventilation is more effective for anesthetizing a patient with an airway foreign body.¹ The most critical foreign body location may be in the hypopharynx because consideration must not only be given to the risk of aspiration from a full stomach, but also to the risk of laryngeal obstruction or worsening ventilation with dislodgment.² It is therefore imperative that the anesthesiologist ascertains the position of any radio-opaque foreign body by reviewing available radiographic studies. If the foreign body is supraglottic, in the hypopharynx, or high in the esophagus, minimizing the risk of dislodgement and maintaining spontaneous respirations appear prudent.

1. Zur KB, Litman RS. Pediatric airway foreign body retrieval: surgical and anesthetic perspectives. *Paediatr Anaesth*. 2010;20:288-9.

2. Seefelder et al. Supraglottic Foreign Body in a Six-Year-Old. *Am J Anesthesiol*. 2001;28(3):145-147.

