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CASE REPORT

Foreign Body Pyriform Sinus: A Rare Presentation

Kanika Rana, Ravi Meher, Vikram Wadhwa, Eishaan Kamta Bhargava

ABSTRACT

Foreign body ingestion is a common clinical problem. Here we present an unusual case of a foreign body (needle) that got embedded in the lateral wall of pyriform sinus (PFS) and could not be retrieved via rigid esophagoscopy. The foreign body could not be visualized on neck exploration and was located by palpation of the mucosa of the lateral wall of PFS and use of a sterile magnet.

Keywords: Foreign body, Needle, Pyriform sinus, Esophagoscopy.

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INTRODUCTION

Foreign body ingestion has been reported in both children as well as adults.[1] Majority of cases have been accidental, except in psychiatric patients, intoxicated adults and young.[2] Some of the objects that have been reported as an ingested foreign body include coins, bones, food debris, safety pins, razor blades and metallic objects. Most common site of foreign body impaction has been found to be the cricopharyngeal junction in children, and the esophagus in adults.[1] Here we present a case of a foreign body embedded in the wall of right PFS for the rarity of its presentation and management.

CASE REPORT

A 19-year-old male presented to the emergency department with complains of a sudden, sharp pain in his throat, and difficulty in swallowing following a meal at a homeless shelter. In addition, he complained of a foreign body sensation in his throat that did not get relieved with repeated self-induced vomiting. On examination, the patient had a normal voice and there were no signs of respiratory distress. Video laryngoscopy revealed pooling of secretions in the right PFS. X-ray soft tissue neck revealed a sharp radiopaque foreign body in the prevertebral soft tissue shadow, at the level of the 4th, 5th and 6th cervical vertebrae (Fig. 1). A contrast enhanced computed tomography (CECT) scan with three-dimensional reconstruction was performed, in view of the risks associated with the nature of the foreign body and the site of impaction, and to decide upon an approach for its removal. CECT neck revealed a sharp, curvilinear, metallic foreign body in the neck on the right side abutting the right common carotid artery (CCA) (Fig. 2). A diagnostic rigid esophagoscopy did not reveal any obvious foreign body. However, presence of slough localized to the lateral wall of the right PFS raised suspicion of its presence at that site. The patient was then taken up for neck exploration via a trans-cervical approach for localization and removal of the foreign body. A curvilinear incision was given on the right side of the neck at the level of thyroid notch. Dissection was begun with a goal to expose the thyroid cartilage and the area of

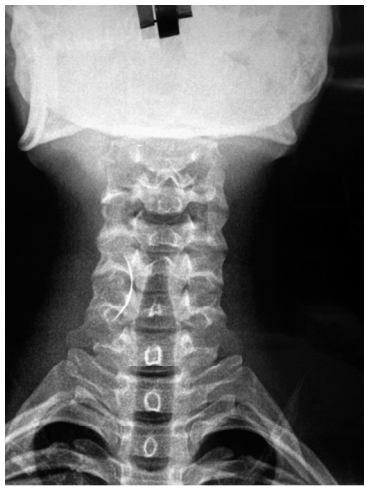

Fig. 1: X-ray soft tissue neck (antero-posterior view) showing a radiopaque foreign body in prevertebral soft tissue shadow at the level of 4th, 5th and 6th cervical vertebrae

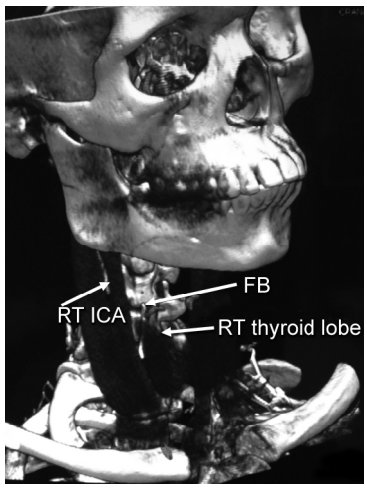

Fig. 2: CECT neck with three-dimensional reconstruction showing a sharp, curvilinear, metallic foreign body in neck on right side, abutting right common carotid artery

right PFS and esophagus. The right carotid sheath was opened and the right internal jugular vein was retracted to expose the right CCA. The bifurcation of CCA was exposed, and the right internal carotid artery (ICA) and external carotid artery (ECA) were identified. No foreign body was identified despite extensive dissection. The mucosa of the right PFS was then gently palpated manually till a metallic object was felt. The object was carefully brought to the surface with the help of a sterile magnet and one end of the metallic foreign body was delivered by piercing the wall of the right PFS. The entire foreign body was then delivered with the help of an artery forceps (Fig. 3). After achieving adequate hemostasis, a corrugated drain was inserted and the wound was closed in layers. Postoperative course was uneventful.

DISCUSSION

Foreign body ingestion is a common presentation in emergency department and carries its own morbidity and mortality. Adhikari et al reported an almost equal percentage of cases in children and adults.[1] The incidence of foreign body ingestion is common in children aged 0 to 4 years whereas in adults it was more commonly seen in 3rd decade. High incidence of cases in children may be due to the habit of putting every object in the mouth, as well as due to nondevelopment of teeth resulted in impaired grinding and swallowing.[3]

In adults, apart from cases of accidental ingestion, foreign body ingestion is commonly seen in psychiatric illness like pica.[4]

Most commonly ingested objects in children include coins, followed by meat bolus and metallic objects. In adults, the most commonly encountered foreign body is meat bolus, followed by coins and dentures. Various unusual foreign bodies have been described in literature like sandburs, retained pill capsules, leeches, blister wrapped tablets, and teeth following facial trauma. Poor dentition, inadequate chewing and eating while sedated can precipitate this problem.

Fig. 3: Postoperative specimen of foreign body (needle) measuring approximately 2.5 cm in length

Fortunately, most ingested foreign bodies pass spontaneously through gastrointestinal tract uneventfully. However, complications may arise in case of impaction. Esophageal perforation is the most common complication. Others complications include deep neck abscess, migration to deep structures, luminal stenosis, trachea-esophageal fistula, mediastinitis, and aortoesophageal fistula.[5] Lai et al evaluated potential risk factors for complications following foreign body ingestion and concluded that presentation delayed for more than 2 days after ingestion and impaction at the level of cricopharynx or esophagus have higher chances of complications.[6]

The role of radiological investigations like neck and chest radiograms and esophagograms, have been described for identification of the type and location of a foreign body.[7] CT imaging in evaluation of cervical esophageal foreign bodies has been recommended by Braverman et al.[8] We also recommend the use of CT scan in case of sharp, metallic foreign bodies to pin-point their exact location as well as proximity to vital structures.

Early removal of foreign body is advocated to minimize complications. Most ingested foreign bodies can be removed endoscopically. An external approach, like lateral pharyngotomy, is indicated in cases of an esophageal tear.[9]

Use of magnets in various forms, like magnetic endoscopes and tubes, have been described in literature for removal of metallic objects, coins and button type batteries without any complications.[10]

CONCLUSION

Foreign body ingestion, seen in both adults and children, is a potentially serious condition that requires prompt attention in the form of appropriate radiological investigations and expedited removal via an endoscopic approach or open surgical intervention. Most life-threatening complications may be averted if timely intervention is made in these cases. CT scan may be used as an important tool in identifying the exact location of these foreign bodies and deciding a plan of action.

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