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Case Report

Esophageal Food Impaction [☆]

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ABSTRACT

Esophageal foreign body impaction requires urgent or emergent removal depending on clinical symptoms. Radiographic evaluation is extremely valuable in guiding management, although not required. The case presented herein describes a 66-year-old male presenting with epigastric pain and globus sensation for three days, inability to tolerate both foods and liquids, and regurgitation. Fluoroscopic evaluation revealed a food impaction in the distal esophagus. Urgent endoscopy confirmed the diagnosis and revealed a peptic stricture secondary to Barrett's esophagus. Although computed tomography has largely replaced the fluoroscopic examination, it can still provide a definitive diagnosis in many cases.

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Introduction

Foreign body ingestion can be classified into two main groups: true foreign object ingestion and esophageal food impaction. True foreign object ingestions include bones (primarily fish), coins/batteries/magnets, (primarily in children), or dental prostheses (primarily in the elderly). In contrast, food impaction primarily consists of meat. The annual incidence of food impactions has been estimated to be ~ 13 per 100,000 in a health maintenance organization population [1]. Most ingested foreign bodies pass without the need for intervention. Endoscopic intervention is required in 10% - 20% of patients, and surgical intervention is required in <1% of cases [2]. The esophagus is the most frequent site of obstruction in the gastrointestinal tract. Esophageal foreign bodies are often impacted at sites of physiologic or pathologic luminal nar-

rowing. Food bolus impactions have an underlying esophageal pathology in 88% - 97% of adult cases such as diverticula, Schatzki rings, peptic strictures, webs, extrinsic compression, esophagitis, motor disorders, and esophageal carcinoma [1].

Case presentation

A 66-year-old male with a history of coronary artery disease and congestive heart failure with a left atrial appendage thrombus noted on echocardiogram and currently on anticoagulation therapy presents to the emergency department with epigastric pain and globus sensation for the past three days since eating Mexican food while watching a sporting event. Patient reports inability to tolerate foods and liquids with regurgitation. The patient was hemodynamically stable with nor-

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Fig. 1 – Lateral radiograph of the neck demonstrates no radiopaque foreign body.

mal laboratory evaluation. Despite regurgitation with liquids, patient was able to tolerate his own secretions.

A frontal and lateral soft tissue neck radiographs demonstrated no radiopaque foreign body (Fig. 1). Admission chest radiograph reveals air in the distal third of the esophagus without any other definitive abnormality (Fig. 2, red arrow). An esophagram was then performed which demonstrated a large intraluminal filling defect (Fig. 3, yellow circle) without any definitive irregularity of the esophageal wall. In addition, the distal most aspect of the esophagus and gastroesophageal junction demonstrates significant luminal narrowing (Fig. 3, red arrow); however, some enteric contrast does pass through the gastroesophageal junction and into the stomach (Fig. 3, blue arrow).

The patient was brought to endoscopy suite the following morning where a large piece of meat was encountered. This was snared and removed in three pieces. Fol-

lowing removal, severe esophagitis secondary to Barrett's esophagus was noted which resulted in severe narrowing of the distal esophagus. The patient was observed for an additional night and placed on pantoprazole with a follow up outpatient esophagogastroduodenoscopy in 8-12 weeks.

Discussion

Radiographic identification is extremely valuable in guiding management. However, imaging is not mandatory and should not delay urgent endoscopy. In patients with vague complaints, plain radiographs can be performed to exclude radiopaque foreign bodies. However, failure to identify a radiopaque foreign object does not exclude it. Computed tomog-

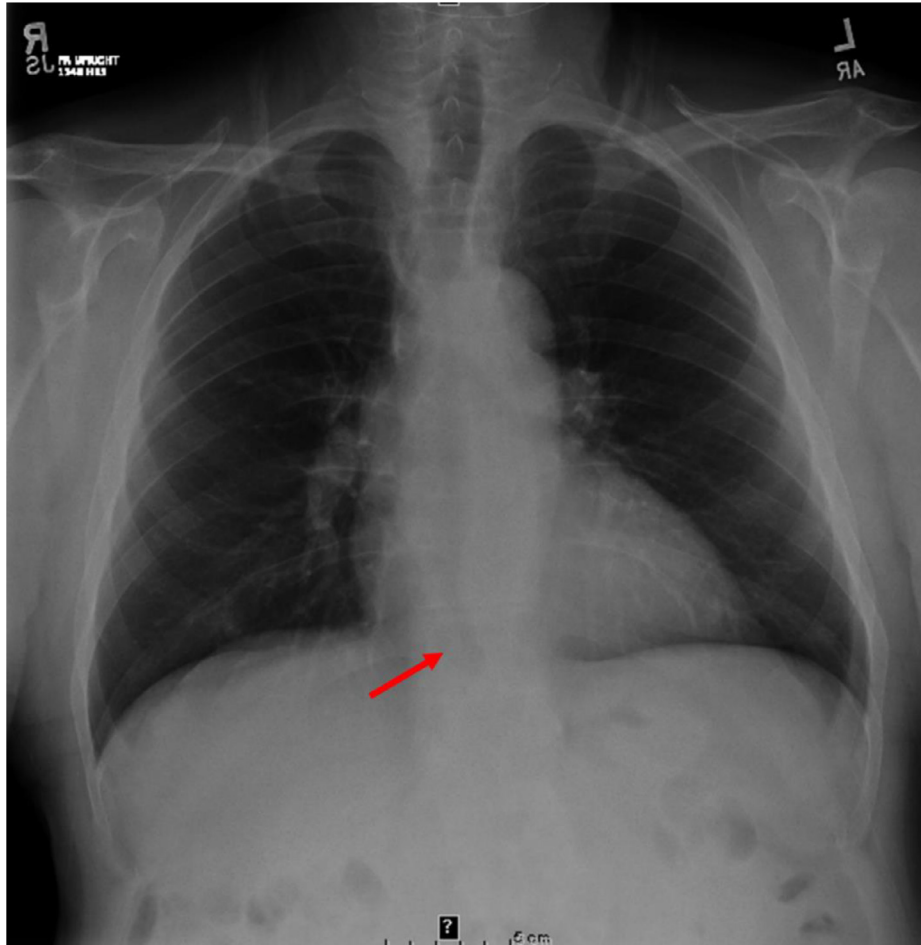


Fig. 2 – PA radiograph is essentially normal, however, with a column of air noted in the esophagus (red arrow). (Color figure is available online.)

raphy (CT) can be performed in patients suspected of ingesting a sharp foreign body or if there is a concern for perforation. Oral contrast should not be administered as it can not only obscure the foreign body; these patients are often at higher risk of aspiration as well. CT exams have a high sensitivity, however, may be falsely negative for cases with a radiolucent foreign body.

All esophageal foreign bodies require urgent endoscopic removal within 24 hours. Emergent endoscopy within 2-6 hours is indicated for sharp objects, button batteries, and patients with complete obstruction as evidenced by drooling and inability to tolerate oral secretions [3]. Urgent endoscopy within 24 hours is required for all other foreign bodies as the risk of complications dramatically increases thereafter [4]. Complications include perforation, obstruction, ulceration, and fistula formation.

Although CT and upper GI endoscopy has largely replaced the fluoroscopic esophagram, there are many indications for which an esophagram can provide valuable information including dysphagia, GERD, globus sensation, general epigastric pain, assessment of fistula, and inability to pass endoscope during endoscopy. Double-contrast examinations with effervescent crystals and thick barium is the gold standard

esophagram, however, is difficult to perform for hospitalized patients, thus single-contrast examinations are more often utilized. Conventional single contrast esophagram has been considered unreliable for detecting reflux esophagitis with an overall sensitivity of 50% - 75% compared to 90% for the double contrast technique [5].

The intraluminal filling defect (Fig. 3) does not demonstrate any definitive origin from the esophageal wall, thus making a food bolus the likely diagnosis. The thin column of contrast distal to the intraluminal filling defect is representative of a benign stricture. Benign strictures are one of the leading causes of dysphagia and most is commonly secondary to gastroesophageal reflux disease. Reflux-induced (“peptic”) strictures classically appear as smooth, tapered areas of concentric narrowing in the distal esophagus ranging from one to four centimeters in length. Sacculations, longitudinal scarring, and fixed transverse folds can also be seen with peptic strictures [6]. Barrett’s esophagus are typical peptic strictures in the distal esophagus characterized by progressive columnar metaplasia, thus a premalignant condition increasing the risk of adenocarcinoma of the esophagus. In contrast, an infiltrative, ulcerative, polypoid appearance is often seen in patients with esophageal cancer [7].

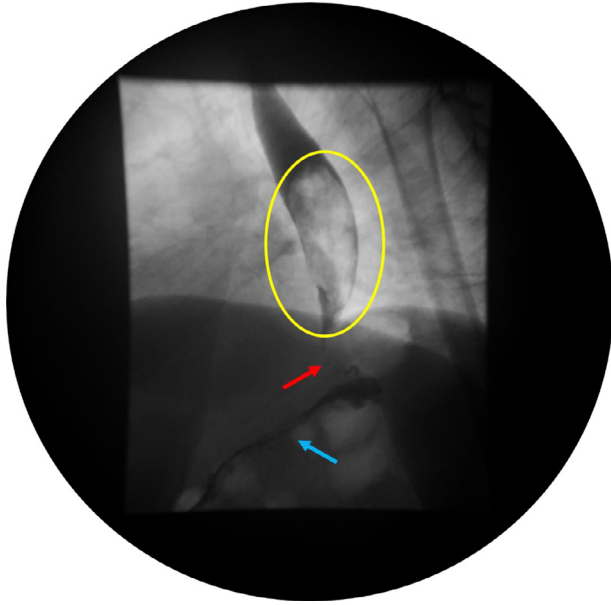


Fig. 3 – A single image from an esophagram demonstrates a large filling defect (yellow circle) without any definitive mural irregularity. Significant luminal narrowing is also noted at the distal most esophagus and gastroesophageal junction (red arrow). However, contrast does pass through the gastroesophageal junction and into the stomach (blue arrow). (Color figure is available online.)

Informed consent statement

Informed written consent was obtained from the patient for publication of this Case Report and all imaging studies.

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