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CLINICAL VIGNETTE

Dysphagia Due to an Epiphrenic Esophageal Diverticulum

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Case Presentation

A 48-year-old male with hypertension, diabetes mellitus and dyslipidemia presented with dysphagia and gastroesophageal reflux disease (GERD). The GERD symptoms are occasional and typically in the evening, managed well with as-needed famotidine. He also notes intermittent dysphagia approximately 2-3 times per month. During episodes of dysphagia, he will feel food stick in the upper chest. Episodes often involve rice or steak. They typically improve with time and he has not had a food impaction requiring urgent endoscopy nor has he had a prior elective upper endoscopy. He denies nausea, vomiting, abdominal pain or odynophagia.

Past surgical history includes umbilical hernia repair. Medications include hydrochlorothiazide, losartan, metformin, empagliflozin, and atorvastatin in addition to his as-needed famotidine. He has no family history of gastrointestinal malignancy or other gastrointestinal issues.

The patient underwent upper endoscopy (Figure 1) which showed a small hiatal hernia and a large distal esophageal diverticulum in addition to normal stomach and duodenum. This was followed by a barium swallow (Figure 2) showing a large epiphrenic esophageal diverticulum, a short segment of focally narrow caliber esophagus just distal to the diverticulum and a small hiatal hernia. CT confirmed a 5.5 x 4.2 x 5.9 cm epiphrenic esophageal diverticulum. Preoperative esophageal manometry showed normal esophageal motility and a 2 to 3 cm manometric hiatal hernia.

Thoracic Robotic esophageal myotomy and diverticulectomy was. The patient did well and after recovery without further dysphagia. He had persistent reflux symptoms.

Discussion

Epiphrenic esophageal diverticula are rare, representing more than 10% of esophageal diverticula and typically occur in the distal 10 cm of the esophagus.[1] They are considered pseudo-diverticula or false diverticula as they consist of the mucosal and submucosal layers herniating through the muscularis propria layer.[1-3] The underlying mechanism of formation is thought to be an increase in intraluminal pressure.[2,4] Underlying causes can include achalasia, diffuse esophageal spasm, hyper-tensive lower esophageal sphincter, peptic stricture, tumor and fundoplication.[1,2] They occur more commonly in men 0.6% and are associated with malignancy.[2,4] Overall incidence ranges from 0.015 to 2%.[2]

Presentation symptoms typically depend on the size of the diverticulum. Most patients have small diverticuli and are asymptomatic.[5] Most common symptoms include dysphagia and regurgitation, similar to Zenker diverticula.[2] Other symptoms include chest pain, weight loss, heartburn, hematemesis, odynophagia, aspiration and nocturnal cough.[1,4]

Traditional evaluation includes endoscopy, barium swallow and esophageal manometry.[6] This allows for diagnosis, establishing the anatomic characteristics of the diverticulum, assessing any underlying esophageal motility disorders and surgical planning.

Asymptomatic patients do not require surgery. For symptomatic patients, treatment is typically surgical and approaches can be via laparotomy, laparoscopy or left thoracotomy. With advancements in minimally invasive surgery, laparoscopy is increasingly common.[6] Myotomy may be performed due to associated underlying motility disorders.[1,2] Resolution of symptoms after diverticulectomy and myotomy is around 90%.[2] Occasionally, fundoplication is performed as well.[1]

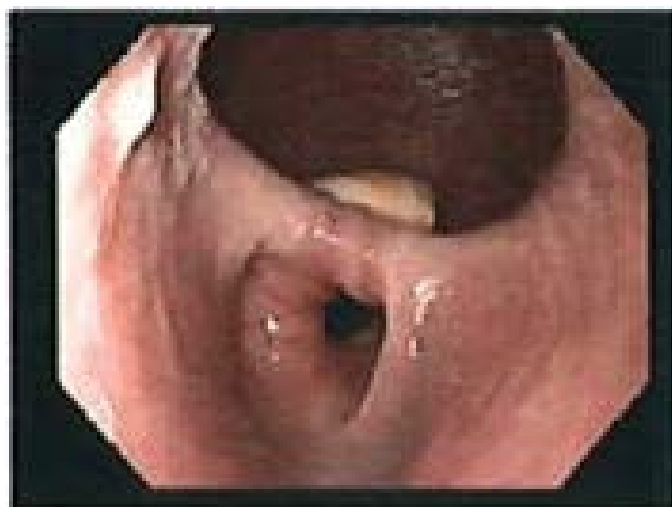

Figure 1. Endoscopy with true lumen on the bottom and diverticulum on top.

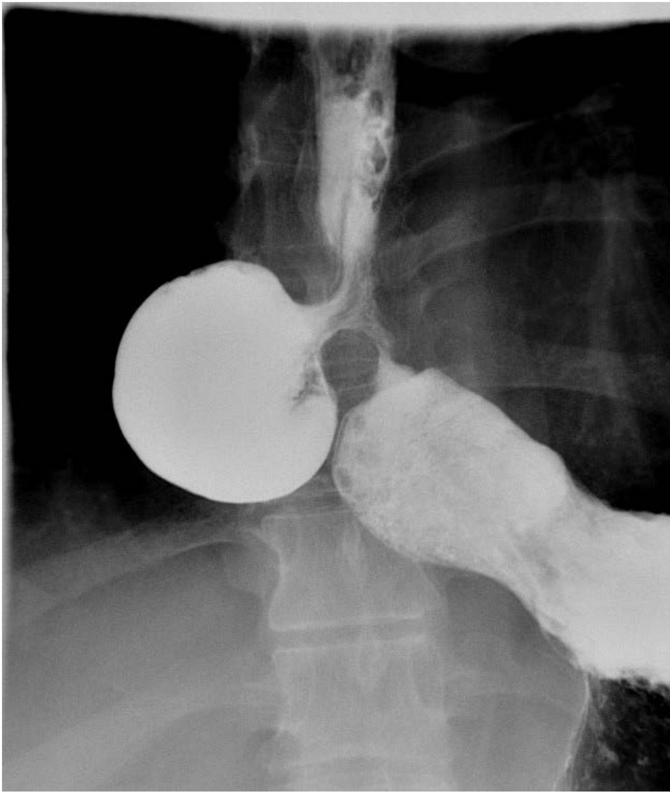

Figure 2. Barium swallow.

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