

Dysphagia Lusoria as a Rare Cause of Dysphagia Due to ARSA and KD With Esophageal Compression

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Introduction

Dysphagia lusoria (DL) is a rare cause of dysphagia in which abnormal vasculature, most often an aberrant right subclavian artery (ARSA) with a retroesophageal course, leads to esophageal compression. We report a case of DL caused by an ARSA and Kommerell diverticulum (KD).

Clinical Presentation of Dysphagia Lusoria

Symptoms of DL	Observed Causes of DL
<ul style="list-style-type: none">• Solid food dysphagia• Weight loss• Regurgitation• Coughing• Dyspnea• Chest pain• Nausea/Vomiting• Foreign body sensation• Horner syndrome	<ul style="list-style-type: none">• Aberrant right subclavian artery• Right-sided aortic arch with aberrant left subclavian artery• Kommerell Diverticulum• Atherosclerosis or aneurysm in previously asymptomatic vascular abnormalities

Case Description

A 64-year-old male with a history of Celiac disease, Sjogren's syndrome, gastroesophageal reflux disease, and rheumatoid arthritis presented with weight loss and worsening solid food dysphagia. Current medications included naproxen and omeprazole. Esophagogastroduodenoscopy (EGD) showed no lesions but a slight narrowing of the proximal esophagus, for which mild dilation was performed. Biopsies indicated no signs of eosinophilic esophagitis or other mucosal abnormalities of the esophagus.

The authors have no conflicts of interest to report.

Case Description

Six months later the patient presented for persistent dysphagia and additional weight loss. An esophagus barium swallow found a 5 cm long narrowing of the esophagus, the narrowest portion measuring 0.9 cm (Figure 1A). No mucosal abnormalities, gastroesophageal reflux, or hiatal hernia were detected.

Chest computed tomography angiogram (CTA) revealed an ARSA which emerged from a fusiform aneurysmal dilation of the left aortic arch and followed a retroesophageal course. This vasculature resulted in compression and displacement of the esophagus (Figure 1B). A common origin of the right and left common carotid arteries was also observed.

The patient was diagnosed with DL, caused by an ARSA and KD. As EGD with dilation would not alleviate this source of external compression, the patient was referred to vascular surgery for definitive management.

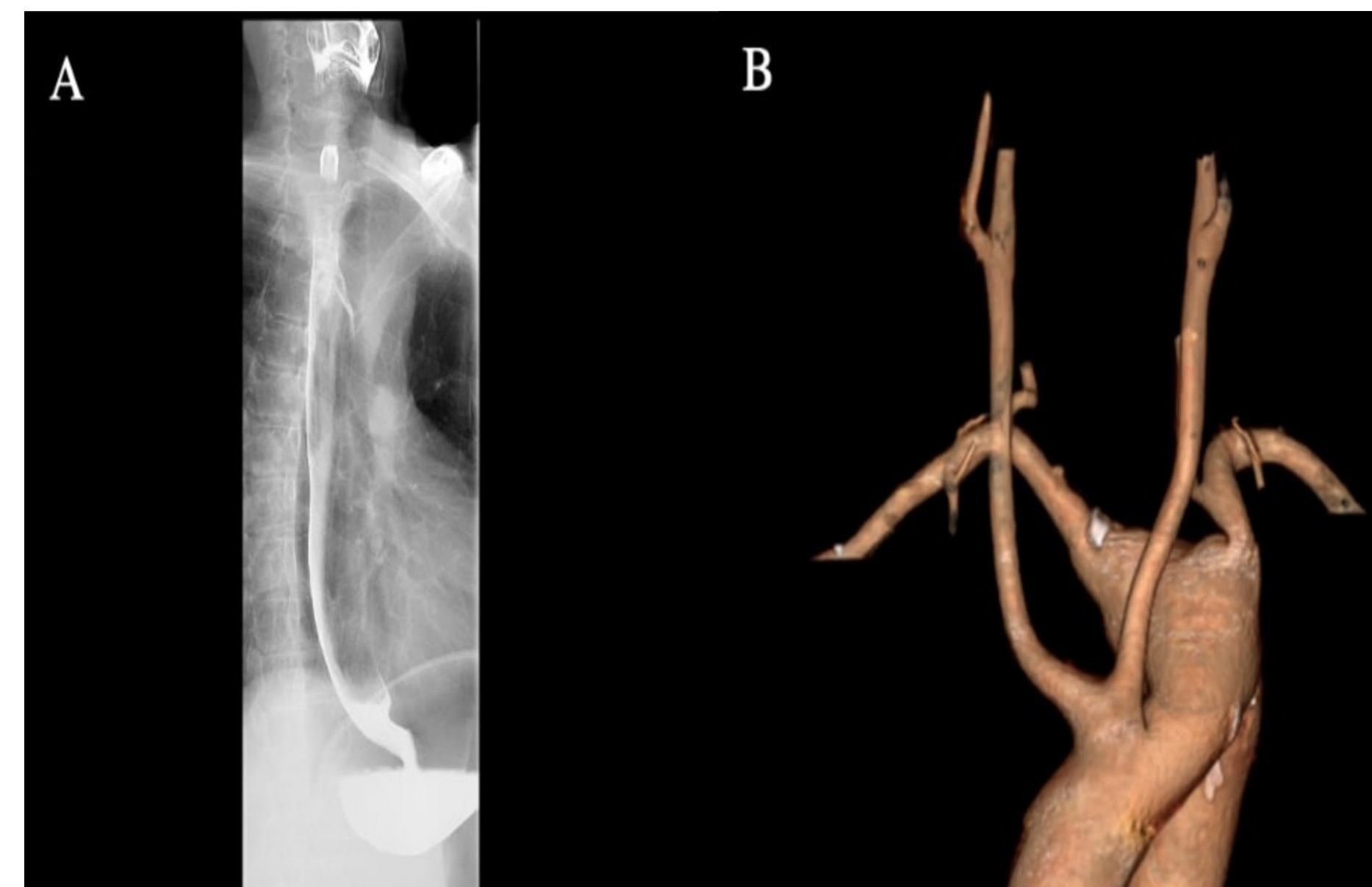


Figure 1. (A) Barium esophagram showing a narrowing of the cervical and thoracic esophagus. (B) 3-dimensional CT showing aneurysmal Kommerell diverticulum (KD) and emerging aberrant right subclavian artery (ARSA), which followed a retroesophageal course.

Discussion

KD is a remnant of the fourth aortic arch which forms a dilation at the point of which an abnormal subclavian artery arises, and is noted in about 15% of patients with an ARSA. DL diagnosis is complicated by the fact that many vascular abnormalities do not result in dysphagia. While CTA confirms the presence of abnormal vasculature, a thorough workup of esophageal function including assessments like EGD and barium esophagram are necessary to confirm that a discovered vascular abnormality is not an incidental finding.

Typically for DL patients, diet/lifestyle modifications and endoscopic or medical interventions like PPI use should be utilized before surgery, as targeting abdominal vasculature may not prove beneficial for all patients. This case is distinguished by the presence of a KD, which makes surgical intervention the best treatment option to relieve a clear source of external compression and avoid possible KD rupture or dissection.

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