

A Middle-aged Patient with an Unusual Cause of Dysphagia

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Introduction

Dysphagia is a common bothersome symptom affecting 3% of the US at any given time. [1] It comes with a wide range of potential causes that can be categorized into anatomic, obstructive, and neuromuscular. The pathophysiologic origin can range from the most common gastroesophageal reflux disease to stroke, malignancy, and anaphylaxis. Due to the broad nature of this symptom, the rarer causes of dysphagia go unrecognized and underdiagnosed. Here we present a rare case of dysphagia in a middle-aged woman diagnosed from radiologic imaging.

Discussion

- ARSA is an anatomical anomaly derived from the abnormal origin of the right subclavian artery directly from the aortic arch as opposed to from the brachiocephalic artery, making the brachiocephalic trunk obsolete.
- It courses through the right arm, crossing the midline of the chest, passing behind the esophagus.
- ARSA has the potential to compress the esophagus, causing dysphagia.
- According to Natsis et al., ARSA was found to have a prevalence of 0.16-4.4% of the general population and has a relative high incidence in females and people of Greek origin. [2]
- In approximately 93% of these patient's the anomaly is asymptomatic however the remaining may experience dysphagia, stridor, dyspnea, or chest pain due to esophageal compression.
- Recognizing this condition prior to any thoracic surgery is essential as unintentional injury to this artery during surgical procedures may be life-threatening. [3]

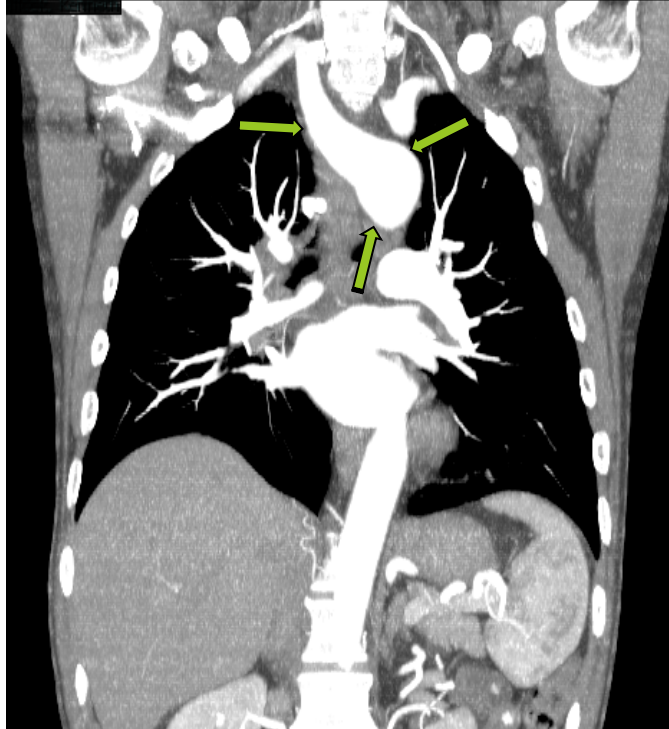


Figure 1: Coronal View
Reconstructed coronal section of computerized chest tomography with maximum intensity projection demonstrating the rise of the right subclavian artery directly from the aortic arch rather than the brachiocephalic artery.

What is the cause of this patient's dysphagia?

Case Description

- A 65-year-old female patient presented to the emergency department with a two-day history of progressive dysphagia.
- Past medical history was significant for squamous cell carcinoma involving the base of the tongue, pharynx, and larynx, which was treated in 2018 with definitive chemoradiation therapy.
- A chest computed tomography scan with intravenous contrast revealed an anomalous prominent right subclavian artery (ARSA) coursing posterior to the esophagus (Figure 1).
- Arrangements were made for the patient to be transferred to a nearby tertiary medical center for a right carotid-subclavian bypass with proximal ligation of the ARSA.

References

1. Cho et al. Prevalence and risk factors for dysphagia: a USA community study. *Neurogastroenterol Motil.* 2015;27(2):212-219. doi:10.1111/nmo.12467
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3. Mahmudlou et al. Aberrant Right Subclavian Artery: A Life-threatening Anomaly that should be considered during Esophagectomy. *J Surg Tech Case Rep.* 2014;6(2):61-63. doi:10.4103/2006-8808.147262