

# Dysphagia Aortica, an Extrinsic Cause of Dysphagia

by Giulio Quarta, David M. Poppers

The etiologies of dysphagia are myriad, including intrinsic disorders of the esophagus, such as neoplasia, stricture, severe reflux disease and motility disorders. Extrinsic etiologies of dysphagia include compression from adjacent lymph nodes or vascular structures. The importance of extrinsic compression is emphasized in this case of a patient presenting with the acute onset of dysphagia to solids, found to have compression of the esophagus secondary to a tortuous aorta. Despite a relatively normal endoscopic exam, this patient demonstrated significant pathology during follow up barium esophagram. Clinical signs and symptoms cannot reliably distinguish extrinsic from intrinsic causes of dysphagia and thus dysphagia aortica, which can be associated with imminent aneurysmal rupture, should be considered in elderly patients with acute onset dysphagia.

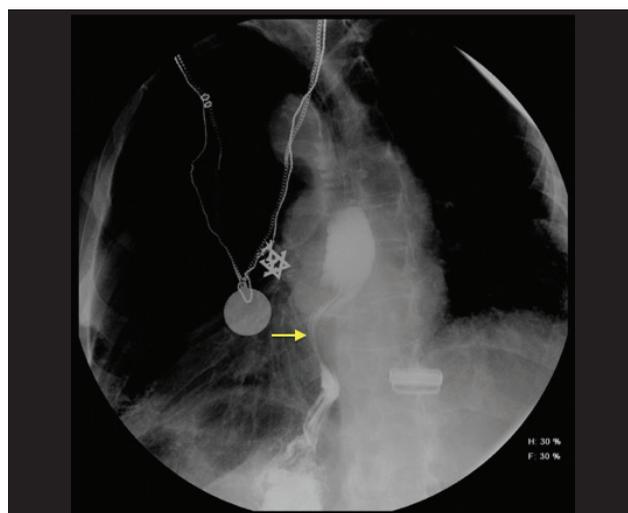
## INTRODUCTION/PRESENTATION

Extrinsic and intrinsic causes of dysphagia are challenging to distinguish from one another, as they often present with similar signs and symptoms. Dysphagia due to any anomaly of the aorta is called dysphagia aortica. In this case we highlight the importance of contrast-enhanced esophagram in an elderly patient presenting with acute onset dysphagia.

A 91 year-old man with a history of gastroesophageal reflux, hyperlipidemia and coronary artery disease presented with the abrupt onset difficulty swallowing solids, associated with an unintentional weight loss of seven pounds over two months. Solid foods such as bread and potatoes were associated with intermittent symptoms. He denied odynophagia, distracted eating and did not wear dentures. Laboratory analysis, including serum hemoglobin and iron studies, was unremarkable.

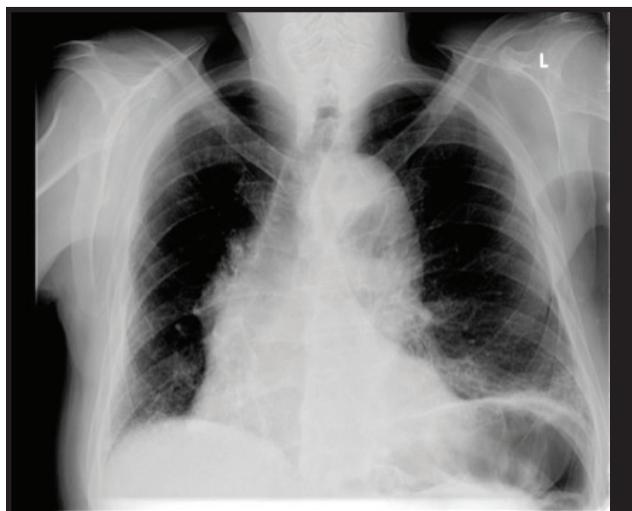
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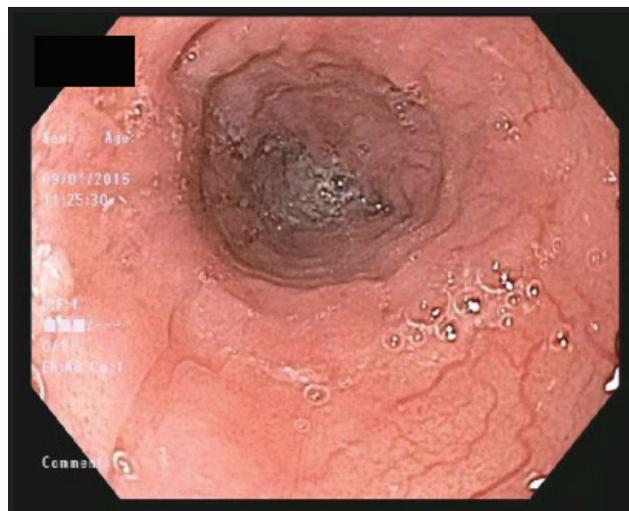


**Figure 1.** Barium Esophagram revealing area of extrinsic compression of the esophagus secondary to a tortuous aorta. The esophagus is dilated proximally with delayed emptying of contrast into the stomach.

Initial evaluation included an upper endoscopy which demonstrated a normal caliber esophagus and unremarkable squamocolumnar junction at 43cm from the incisors. The gastric mucosa in the antrum showed a patchy erythematous pattern; biopsies revealed



**Figure 2.** Upright chest x-ray revealing a widened mediastinum and tortuous aorta.



**Figure 3.** Upper endoscopy demonstrates a patent esophageal lumen without evidence of extrinsic compression or dilation.

reactive gastropathy without intestinal metaplasia or *Helicobacter pylori*. Chest X-ray revealed a prominent thoracic aorta with widening of the cardiac silhouette. A single-contrast barium esophagram revealed a dilated esophagus with extrinsic narrowing by a tortuous aorta and delayed esophageal emptying in the semi-upright position. Of note, cross sectional abdominal imaging revealed a normal aorta and branches.

## Discussion

Pape first described dysphagia aortica in 1932, affecting women with short stature, old age, hypertension and kyphosis.<sup>1</sup> Compression of the esophagus can originate from tortuosity, dilation or aneurysm of an atherosclerotic aorta. Barium esophagram has been shown to be the most reliable method of diagnosis of this condition, and thoracic computed tomography (CT) facilitates early diagnosis. On endoscopy, pulsatile extrinsic compression resulting in stenosis with proximal esophageal dilation is considered diagnostic. Manometry can reveal local high-pressure regions associated with cardiac pulsation.<sup>2</sup> In cases of thoracic aortic aneurysm, endovascular repair is associated with significant improvement in symptoms and morbidity.<sup>3</sup> Mild cases of dysphagia aortica are typically treated conservatively, and patients who are not surgical candidates may be managed with insertion of a percutaneous gastrostomy tube.<sup>2</sup> Dysphagia aortica is rarely considered in the differential diagnosis of dysphagia. Vascular extrinsic esophageal conditions such as dysphagia lusoria, in which esophageal compression from an aberrant

right subclavian artery may produce a similar clinical presentation, should also be considered. Lack of awareness can lead to a significant diagnostic delay. Fatal cases of thoracic aorta aneurysmal rupture have been reported,<sup>4</sup> especially when associated with alarm features such as chest or back pain. However, intrinsic etiologies of dysphagia, such as esophageal spasm or invasive esophageal cancer, may also be associated with similar symptoms, often confounding and delaying timely diagnosis and intervention. Routine imaging such as chest X-ray or thoracic CT can quickly and non-invasively be diagnostic. In elderly patients with kyphosis and hypertension presenting with dysphagia, we suggest that such conditions be entertained in the differential diagnosis, and that timely use of imaging studies be utilized to evaluate for extrinsic causes of dysphagia. ■

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