CLINICAL VIGNETTE

A Case of Cardiovascular Dysphagia

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Case Presentation

A 77-year-old presented with progressive difficulty swallowing over several months. He describes a sensation of "a marble stuck in his throat" which has gradually worsened over the last few months. He is unable to identify where things feel like they are getting stuck, and reports that his swallows feel "incomplete." He feels he has lost weight, however, shows a 10lbs weight gain since his last visit one year ago. He has increased lower extremity swelling and underwent a varicose vein ablation two months prior with worsened leg swelling. Past medical history is notable for atrial fibrillation and severe mitral regurgitation which was previously asymptomatic. Examination was notable for a 3+ holosytolic murmur heard best at the apex and 3+ bilateral pitting edema. CT imaging of the neck several days prior to his visit demonstrated a partially visualized but dilated intrathoracic esophagus containing food debris. Imaging also noted an aberrant right subclavian artery indenting the posterior wall of the esophagus. He was admitted for worsened congestive heart failure. He was aggressively diuresed with repeat echocardiogram again demonstrated severe mitral regurgitation along with a massively dilated left atrium. His dysphagia persisted during his hospitalization and upper endoscopy demonstrated a 4cm area of extrinsic compression in the lower esophagus. This area had a pulsatile quality and there were two small superficial ulcerations at the proximal area of the narrowing. Cross sectional imaging of the chest (Figure 1A) with a barium esophogram (Figure 1B) were obtained. The esophogram demonstrated a patulous esophagus with a smooth narrowing and transition to a non-dilated sub-carinal esophagus. This was in a lower location than would be expected for his previously noted aberrant subclavian artery. CT demonstrated a markedly dilated left atrium with compression of the posteriorly situated esophagus. The patient underwent successful mitral valve repair with left atrial reduction. His postoperative course was uncomplicated and his dysphagia symptoms completely resolved following surgery.

Discussion

Dysphagia symptoms are not uncommon especially in older adults and can be characterized as either occurring to solids, liquids or a combination. Dysphagia to liquids or a combination is often suggestive of a underlying motility disorder whereas dysphagia to solids alone typically is related to an anatomic abnormality such as a stricture or ring. Patients with dysphagia symptoms localized to the esophagus should be referred for a diagnostic endoscopy with additional diagnostic testing including barium esophogram and esophageal manometry in selected cases. Vascular abnormalities as a cause of dysphagia are rare and often related to congenital vascular abnormalities. An aberrant subclavian artery (most commonly the right) where the path of the subclavian takes a retroesophageal course creating a vascular sling can result in dysphagia symptoms.[1] This is termed dysphagia lusoria. The incidence of an aberrant subclavian artery is rare, affecting 0.5-2% of the population with a minority (20-40%) of patient experiencing symptoms. Thus, it is important to perform a thorough evaluation for other causes of dysphagia before attributing symptoms to an aberrant subclavian artery. Our patient did have an aberrant right subclavian, but it was clearly not the cause of his symptoms. His symptoms supported a more distal area of obstruction and imaging and response to atrial reduction and mitral valve repair. Vascular causes of dysphagia can also be acquired with dysphagia related to a dilated aorta (dysphagia aortica) or a dilated atrium (dysphagia megaloatriensis). Both are rare and with limited case reports.[2] Cases can be managed differently based on symptom severity. For mild cases of dysphagia lusoria, diet modification alone may be sufficient. In more symptomatic cases, or in cases where diet modification fails to adequately manage symptoms surgery may be required. When cardiovascular dysphagia is related to underlying heart failure, medical management of heart failure can be effective. However, as in our patient, where diuresis and medical management of his heart failure did not result in symptom improvement, surgical management may be required.[3] In summary our case demonstrates the importance of pursuing standard diagnostic evaluation in cases of dysphagia. In appropriate patients a cardiovascular cause of dysphagia should be considered when initial endoscopy fails to demonstrate a primary esophageal abnormality. In cases of suspected dysphagia lusoria a thorough evaluation for other causes of dysphagia should be pursued including esophageal manometry. In our patient the primary indication for his cardiac surgery was for management of his heart failure and the subsequent resolution of his symptoms mitigated need for additional testing.

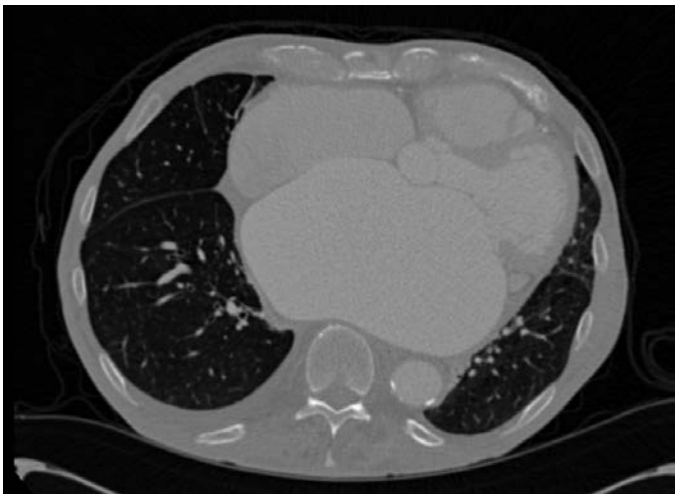

Figure 1A shows a massively dilated left atrium compressing the posteriorly situated esophagus.

Figure 1B shows the dilated proximal esophagus with distal tapering in the expected location of the left atrium.

REFERENCES

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