Disappearing Dysphagia and the Spontaneous Intra-Esophageal Hematoma

Wayne Wheeler M.D.[1], Stephen Landreneau M.D. FACG[2]

[1]Department of Internal Medicine, LSU Health Sciences Center, New Orleans, LA

[2]Department of Gastroenterology, LSU Health Sciences Center, New Orleans, LA

Introduction

- Dysphagia is a chief complaint with a differential diagnosis involving multiple mechanisms. The pathophysiology may involve mechanical, structural, or infectious etiologies.
- This case represents a rare example of a spontaneous intra-esophageal hematoma (IEH) for a patient presenting with dysphagia.

Case Description

- **A 73-year-old female, with a past medical history of atrial fibrillation on rivaroxaban, presented to the emergency department with a three-day history of sudden onset dysphagia to solids and liquids.**
- CT chest showed an esophageal mass, with a measured density of 34 to 46 Hounsfield units, in the mediastinum with upper esophageal distension (Image 1).
- Esophagogastroduodenoscopy (EGD) revealed severe extrinsic esophageal stenosis (Image 2).
- Endoscopic ultrasound visualized a heterogenous esophageal mass within the submucosa and muscularis propria without invasion into the pericardium or aortic arch.
- Ultrasound-guided fine needle aspiration of the lesion resulted necro-inflammatory debris.
- Repeat CT chest was ordered to further delineate the mass.
- Surprisingly, the mass and mass effect were no longer visualized. Instead, there was a small residual pre-esophageal collection of fluid and air that appeared to be communicating with the true esophageal lumen via a tract (Image 3).
- Repeat EGD discovered a small mucosal defect suspicious for perforation in the location of the previously biopsied mass (Image 4).
- CT Esophagram with contrast found a persistent tract of air anterior to the true esophageal lumen without extravasation into the pre-esophageal lumen (Image 5).
- To investigate a source of thoracic bleeding, a chest CTA was ordered which revealed a blush of contrast from a mid-esophageal branch (image 6).

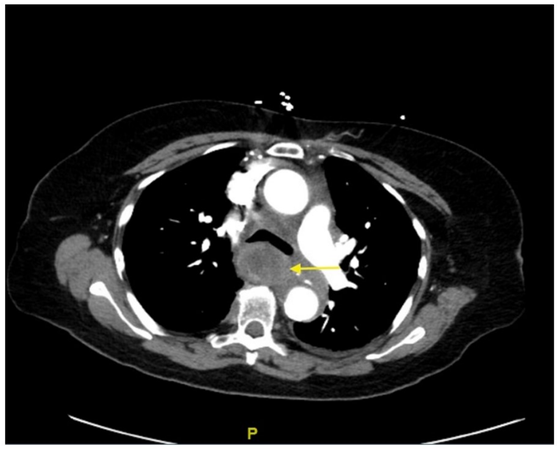

Image 1. CT Chest with mediastinal mass causing dysphagia.

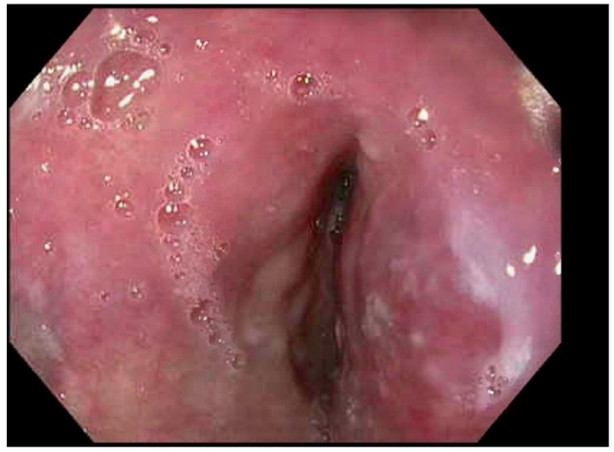

Image 2. EGD with severe esophageal stenosis from extrinsic compression.

Image 3. Repeat CT Chest with resolution of mass & residual collection of air concerning for perforation.

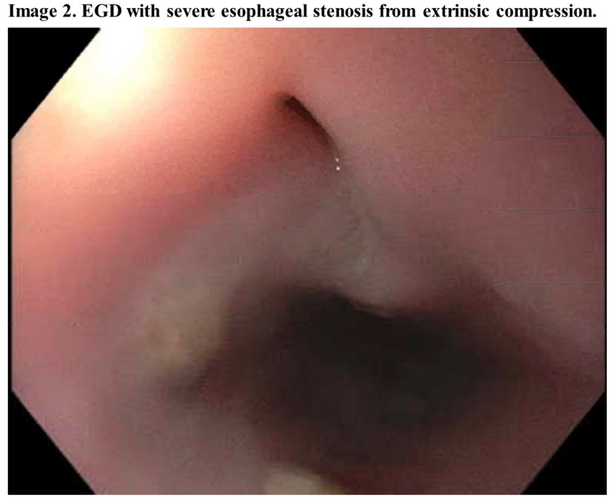

Image 4. Repeat EGD with esophageal defect at site of biopsy.

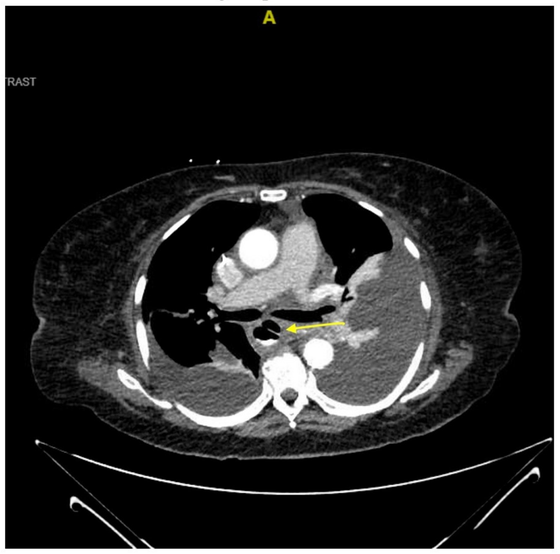

Image 5. CT Esophagram without extravasation of contrast into tract.

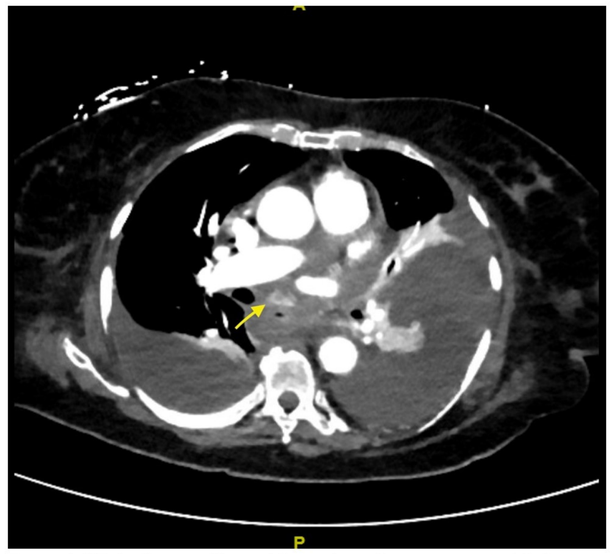

Image 6. CT Angiogram Chest with esophageal artery contrast blush.

Discussion

- Intramural esophageal hematoma (IEH) is an unusual esophageal injury and a rare diagnosis for a presenting symptom of dysphagia(1).
- The most common chief complaint for an intramural esophageal hematoma is severe retrosternal chest pain(2).
- IEH is commonly seen following blunt and penetrating trauma or a complication of an endoscopic procedure(3).
- Spontaneous hematomas are those that lack a precipitating event and commonly occur in patients on anticoagulation(4).
- The measured computed tomography density of a hematoma can vary between 30 to 80 Hounsfield units depending on chronicity(5).
- Hematomas can become encapsulated and present with a wide range of histopathologic findings including bleeding, fibrosis, hyalinization, and inflammatory necrosis (6).

Case Conclusion

- Interventional radiology performed a selective thoracic aortogram without any evidence of active bleeding.
- The patient's dysphagia resolved, she was tolerating a regular diet, and ultimately discharged to SNF.
- These collective findings support a spontaneous esophageal artery bleed and the development of an intra-esophageal hematoma which ultimately decompressed through the esophageal lumen following fine needle aspiration.

References

1. Justin Cheung, Nestor Muller, Alan Weiss, "Spontaneous Intramural Esophageal Hematoma: Case Report and Review" Canadian Journal of Gastroenterology and Hepatology, Vol. 20, Article ID 764714, 2 pages, 2006.
2. Kerr WF. Spontaneous intramural rupture and intramural haematoma of the oesophagus. Thorax. 1980 Dec;35(12):890-7. doi: 10.1136/thx.35.12.890. PMID: 6973833; PMCID: PMC471408.
3. Younes, Ziad M.D.; Johnson, David A. M.D.. The Spectrum of Spontaneous and Iatrogenic Esophageal Injury: Perforations, Mallory-Weiss Tears, and Hematomas. Journal of Clinical Gastroenterology 29(4):p 306-317, December 1999.
4. Yamashita K, Okuda H, Fukushima MD, Arimura Y, Endo T, Imai K. A case of intramural esophageal hematoma: Complication of anticoagulation with heparin. Gastrointest Endosc 2000;52:559-61.
5. DenOtter TD, Schubert J. Hounsfield Unit. 2023 Mar 6. In: StatPearls [Internet]. Treasure Island (FL): StatPearls Publishing; 2023 Jan–. PMID: 31613501.
6. Ohta N, Watanabe T, Ito T, Kubota T, Suzuki Y, Ishida A, Aoyagi M, Matsubara A, Izuhara K, Kakehata S. Clinical and pathological characteristics of organized hematoma. Int J Otolaryngol. 2013;2013:539642. doi: 10.1155/2013/539642. Epub 2013 Mar 6. PMID: 23533421; PMCID: PMC3606777.