

Dysphagia from an Ischemic Colonic Segment

UAB MEDICINE

Knowledge that will change your world

in a patient with Colon Interposition

Yassmin Hegazy¹, Usman Barlass², Douglas Morgan², Dane Johnson²,
Pooja Bhavsar³, Kyanam Kondal Kabir Baig²

University of Alabama at Birmingham, Department of Internal Medicine¹, Department of Gastroenterology and Hepatology², B.J. Medical College, Ahmedabad, India³



Introduction

- Colon interposition of the esophagus in adults can lead to future complications including colonic ischemia, stricture formation, and adenocarcinoma.

Case Description

39yo male immigrant presents with progressive dysphagia

- Remote history of emergent colon interposition following gunshot wounds of the esophagus
- 6 month history of solid→liquid food dysphagia
- Associated weight loss and regurgitation
- Stable vitals with an unremarkable physical exam and labs

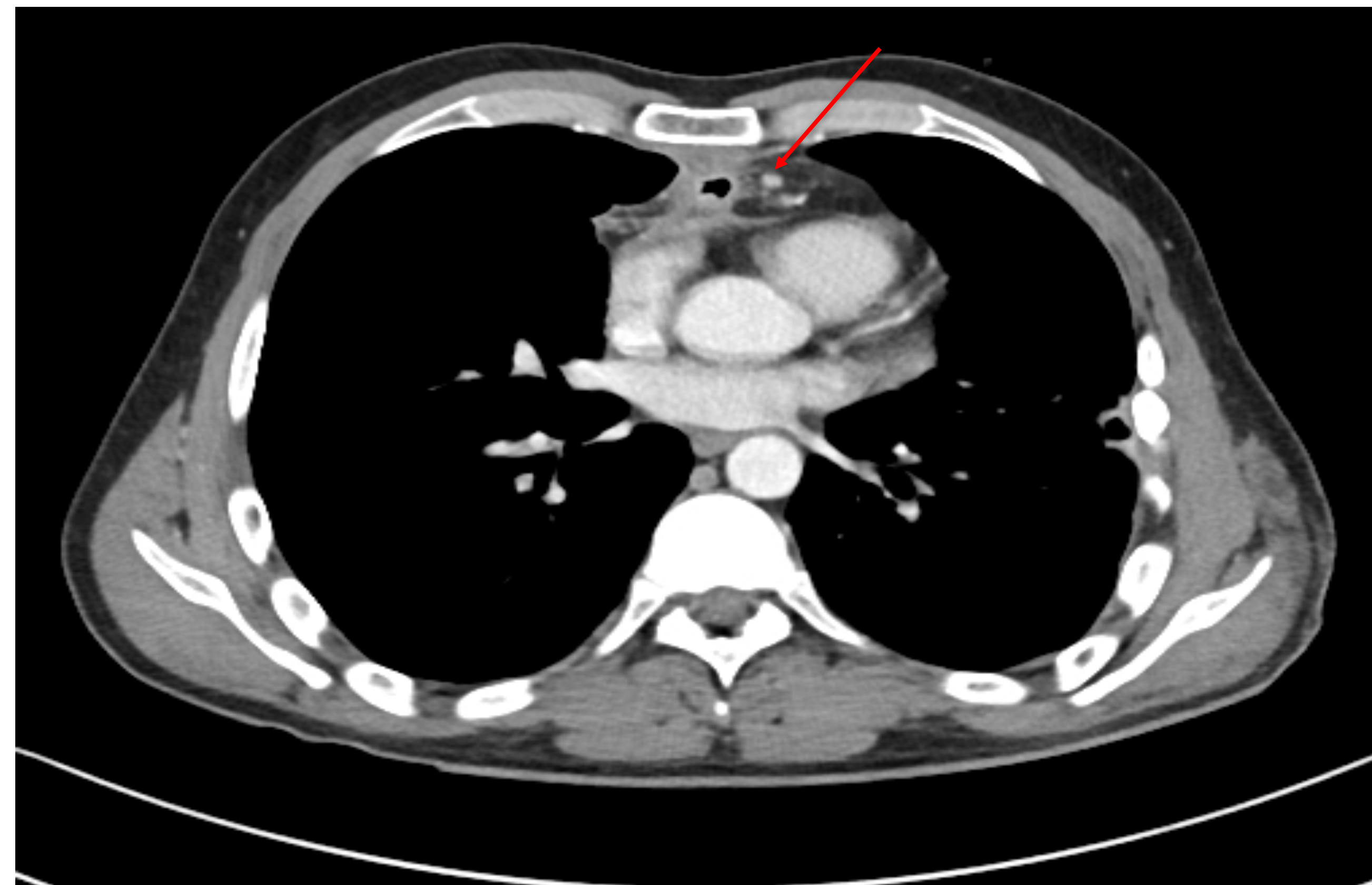
Imaging:

- Esophagram revealed a severe high-grade, upper mid-esophageal stricture with proximal dilation
- CT imaging showed an esophageal conduit in the anterior mediastinum with proximal conduit distension and distal conduit narrowing

EGD:

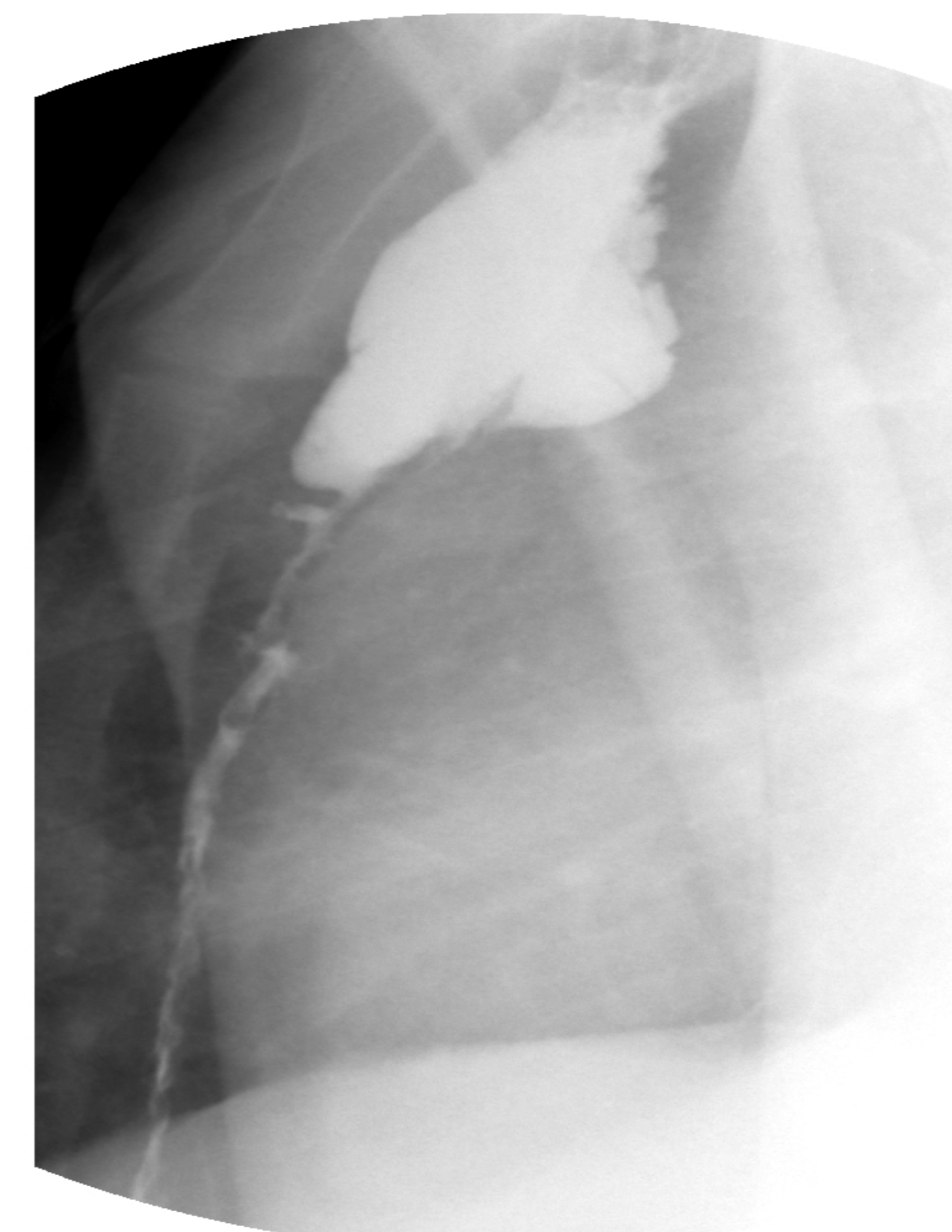
- Stricture (6 mm) at the esophago-colonic anastomosis, 19 cm from the incisors
- Stricture traversed with an ultra-thin endoscope which also revealed a severe stenosis distally in the colon segment with a partially obstructing inflammatory polyp
- The proximal stricture was dilated in a staged fashion to advance the upper endoscope to the colonic stenosis
- A wire was advanced and the stenosis length was estimated to be 11 cm under fluoroscopy
- The stenosis was stented with 20 mm x 12 cm covered metal stent

CT Chest



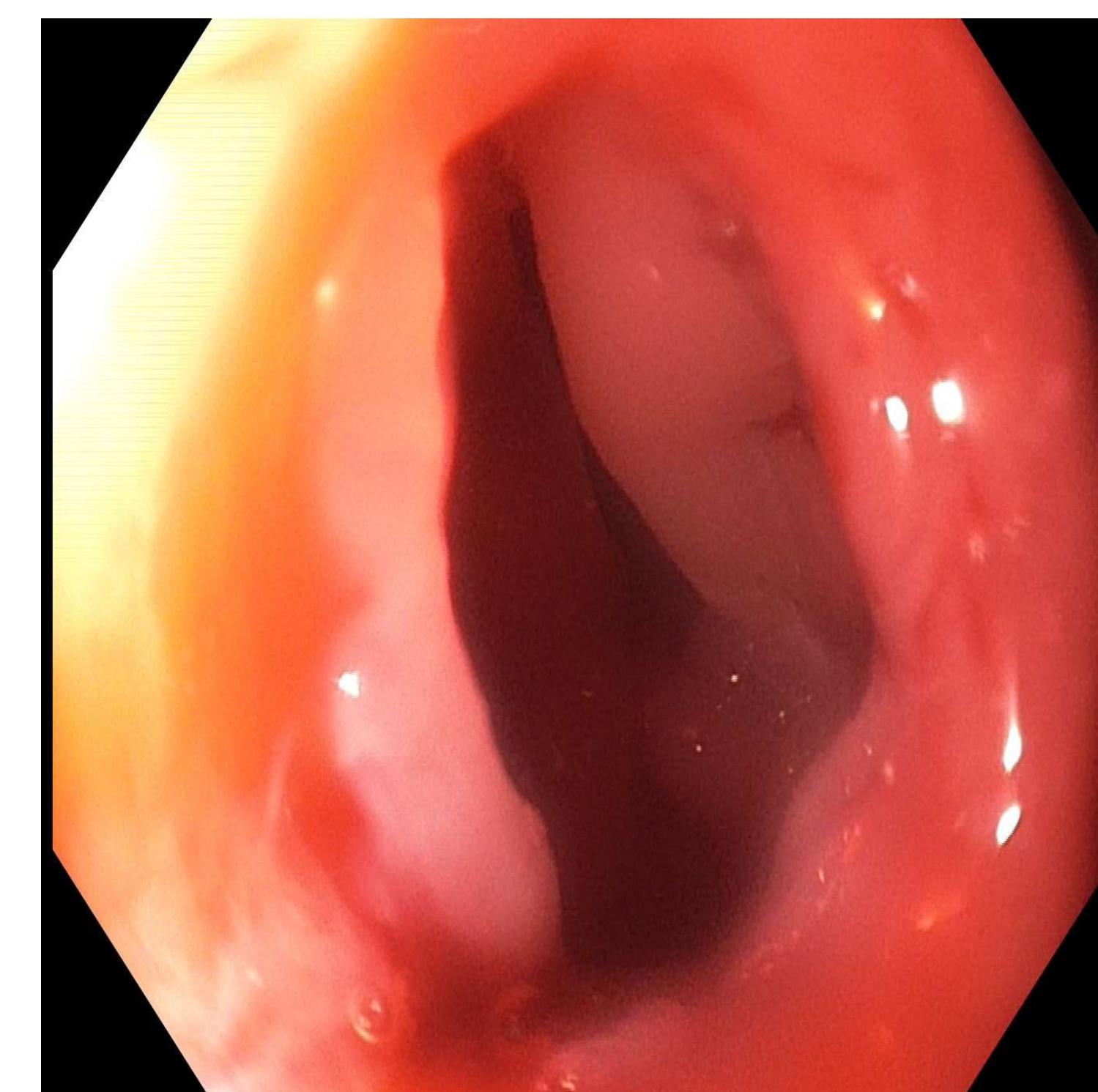
CT chest showing conduit extending along anterior mediastinum and deep into the sternum with anastomosis in upper neck and abrupt caliber change in mid esophageal conduit at level of right main pulmonary artery with associated wall thickening, fat stranding, and small adjacent lymph nodes measuring up to 5mm (red arrow)

Esophagram



Esophagram showing severe high-grade stricture at the junction of the cranial one third and distal two thirds of the esophagus

Anastomosis



Esophago-colonic anastomosis found in the middle/lower third of the esophagus at 29cm from incisors

Post-EGD

- The stent was removed one month following the procedure with initial improvement in dysphagia and a normalized diet
- The patient had re-occurring symptoms one week later
- A repeat EGD with dilation and stenting was performed with improvement
- A multidisciplinary team recommended definitive treatment for the chronic ischemic segment-related complications.

Discussion

- Conduit ischemia with anastomotic strictures can occur in patients with a history of colonic interposition
- Evaluation with double contrast studies may reveal ischemic changes including loss of haustration and stricture formation in the colon graft
- Dilation is an effective treatment
- Chronic ischemia can be a delayed complication of the interposed colon resulting from non-necrotic vascular insufficiency leading to fibrosis, stricture formation, and dysphagia
- This case highlights the utility of adenocarcinoma screening in this patient population.

References

- Briel JW, Tamhankar AP, Hagen JA, DeMeester SR, Johansson J, Choustoulakis E, Peters JH, Bremner CG, DeMeester TR. Prevalence and risk factors for ischemia, leak, and stricture of esophageal anastomosis: gastric pull-up versus colon interposition. *J Am Coll Surg*. 2004 Apr;198(4):536-41; discussion 541-2. doi: 10.1016/j.jamcollsurg.2003.11.026. PMID: 15051003.
- Cerfolio RJ, Allen MS, Deschamps C, Trastek VF, Pairolero PC. Esophageal replacement by colon interposition. *Ann Thorac Surg*. 1995 Jun;59(6):1382-4. doi: 10.1016/0003-4975(95)00182-k. PMID: 7771814.
- Cheng W, Heitmiller RF, Jones B. Subacute ischemia of the colon esophageal interposition. *Ann Thorac Surg*. 1994 Apr;57(4):899-903. doi: 10.1016/0003-4975(94)90199-6. PMID: 8166538.
- Urschel JD. Late dysphagia after presternal colon interposition. *Dysphagia*. 1996 Winter;11(1):75-7. doi: 10.1007/BF00385803. PMID: 8556882.
- Postlethwait RW. Colonic interposition for esophageal substitution. *Surg Gynecol Obstet*. 1983 Mar;156(3):377-83. PMID: 6338613.