Case Report

Esophageal intramural hematoma: An unusual cause of acute onset chest pain

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ABSTRACT

An elderly lady in her mid-70 s who is known to have coronary artery disease for which she was on dual antiplatelet therapy, presented with acute onset chest pain and dysphagia. The cardiac evaluation was unremarkable. Esophagogastroduodenoscopy (EGD) showed a large intramural hematoma in the esophagus, causing luminal narrowing. A diagnosis of esophageal intramural hematoma secondary to antiplatelets was made based on the findings of Gastrografin swallow, EGD, and contrast-enhanced computed tomography of the thorax along with the history of taking dual antiplatelets. Antiplatelets were subsequently stopped. She was managed in the critical care unit with intravenous fluids, pantoprazole infusion, empirical antibiotics, fentanyl infusion, and total parenteral nutrition. The relook EGD showed a resolving hematoma. She was maintained on intravenous pantoprazole, allowed to take oral feeds gradually, and was subsequently discharged. To conclude, intramural hematoma of the esophagus can present with acute chest pain and dysphagia. Careful history taking, especially the drug history and appropriate investigations, are pivotal as there are high chances of misdiagnosis and unwanted anticoagulant therapy.

Key words: Anticoagulant, Antiplatelet, Chest pain, Dysphagia, Esophagogastroduodenoscopy, Esophagus, Gastrografin swallow, Intramural hematoma, Odynophagia

Acute onset chest pain is most often due to myocardial infarction. However, at times, chest pain can be associated with esophageal pathology, especially when accompanied by dysphagia. Acute esophageal symptoms include acute dysphagia or food bolus impaction (primarily due to strictures, Schatzki ring, or eosinophilic esophagitis), acute chest pain with odynophagia due to infections, motility disorders, and acute esophageal rupture (including esophageal intramural hematoma) [1].

CASE REPORT

We present a case of esophageal intramural hematoma secondary to antiplatelets, as an unusual cause of acute onset dysphagia. The exact prevalence of esophageal intramural hematoma following antiplatelet or anticoagulant therapy is not known due to its extreme rarity. However, based on our knowledge following the literature review, the prevalence is estimated to be <10 cases worldwide. We report this case mainly to highlight esophageal intramural hematoma as a potential cause of chest pain with dysphagia.

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An elderly lady in her mid-70 s who is known to have type 2 diabetes mellitus and coronary artery disease status post percutaneous transluminal coronary angioplasty to her left anterior descending artery for which she was on dual antiplatelet therapy, presented with chest pain and dysphagia of 1-day duration.

On examination, she was afebrile with a heart rate of 120 bpm, blood pressure of 110/70 mmHg, SpO_2 of 95% with room air, and a Glasgow Coma Scale score of 15/15. Epigastric tenderness was noted on per-abdomen examination. As cardiac evaluation was unremarkable, she was referred to the department of gastroenterology for further workup.

Her blood picture showed anemia (hemoglobin of 11.3 g/dL on day 1) and leucocytosis. Hemoglobin level was monitored daily. Her hemoglobin level on day 2 was 8.8 g/dL. The liver function test was within normal limits. Ultrasonography of the abdomen was normal.

Upper gastrointestinal obstruction was suspected. Gastrografin swallow (Fig. 1) was done, which showed luminal narrowing of the esophagus. Esophagogastroduodenoscopy (EGD) (Fig. 2a) done after sedation showed a large intramural hematoma in the esophagus, causing luminal narrowing. Contrast-enhanced computed tomography (CECT) of the thorax (Fig. 3) revealed a soft tissue density lesion within the middle and distal esophagus with complete luminal obstruction. Serum amylase and lipase

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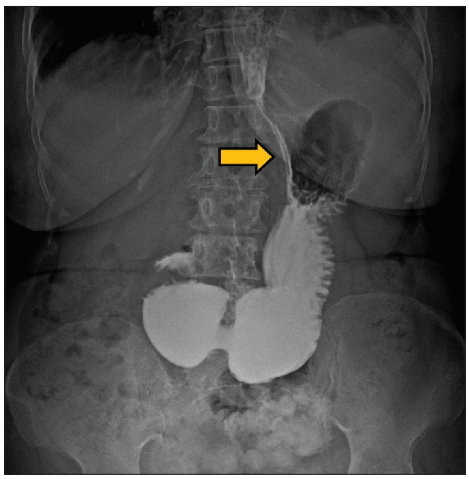

Figure 1: Gastrografin swallow showing luminal narrowing of the esophagus (marked by yellow arrow)

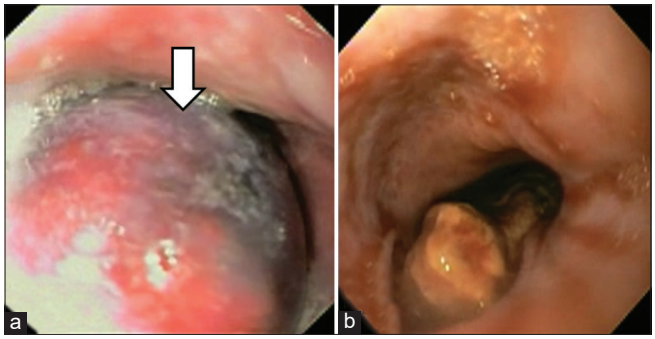

Figure 2: (a) Esophagogastroduodenoscopy (EGD) showing a large intramural hematoma (marked by white arrow) in the esophagus causing luminal narrowing; (b) Re-look EGD showing more than 50% circumference of the esophagus sloughed out and resolving hematoma

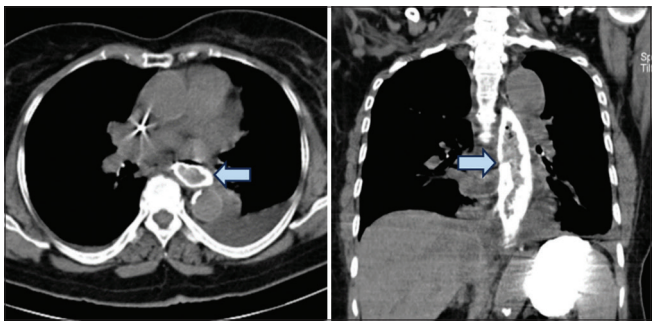

Figure 3: Axial and coronal views of contrast-enhanced computed tomography thorax showing soft tissue density lesion within the middle and distal esophagus with complete luminal obstruction (marked by blue arrows)

levels checked as part of the workup, were also normal. A diagnosis of esophageal intramural hematoma secondary to dual antiplatelet therapy was made. Antiplatelets were immediately stopped. Endoscopy-guided nasogastric tube placement was done for feeding. She was managed in the critical care unit. Initially, she was kept on nil by mouth (NPO) and started with intravenous fluids and pantoprazole infusion. Empirical antibiotics, fentanyl infusion, and total parenteral nutrition were also given.

The relook EGD (Fig. 2b) done after 3 days showed more than 50% circumference of the esophagus sloughed out and resolving hematoma. She was maintained on intravenous pantoprazole. Her hemoglobin level on day 7 was 9.4 mg/dL. She was gradually improving, started to take liquid oral feeds, and was subsequently discharged on day 7 with advice to follow up.

DISCUSSION

Acute chest pain is a medical emergency necessitating immediate cardiac evaluation. However, once cardiac cause has been ruled out, thorough gastroenterological evaluation is needed, especially when accompanied by acute dysphagia.

Intramural hematoma may develop following anticoagulant or antiplatelet therapy and can involve any part of the gastrointestinal tract [2]. Intramural hematoma of the esophagus (IHE) is a rare condition usually seen in elderly patients, especially women [3]. While IHE itself is a rare condition, IHE following antiplatelet therapy is even rarer, with only very few cases [2,4] reported worldwide. Some recognized causes of IHE [5] include forceful vomiting or retching, anticoagulant [6,7] or antiplatelet use, coagulopathy [8], foreign body ingestion, or instrumentation causing direct injury to the esophagus. Meulman *et al*. [7] in 1994 described three cases of spontaneous IHE, out of which two patients were on anticoagulation with heparin. Strowd *et al*. [9] reported a case of spontaneous IHE presenting as chest pain. The patient was taking low-dose aspirin, alendronate, and ferrous sulfate, all of which are associated with esophageal injury [9]. Antiplatelet therapy was considered the cause for IHE in our patient, as there was no history or evidence of other causes like injury to the esophagus or forceful vomiting. She also did not have any history suggestive of coagulopathy.

Chest pain, dysphagia or odynophagia, and hematemesis form the triad of IHE. However, < 1/3 of patients have all three symptoms [3,10]. Although multiple modalities can aid in diagnosing IHE, CECT thorax remains the preferred primary investigation modality, and it often shows a smooth filling defect in the esophageal lumen [11,12]. In our case, we used Gastrografin swallow, EGD, and CECT thorax to arrive at the diagnosis. Treatment for IHE is usually conservative, with identification of the underlying cause being the crucial step. Keeping the patient on NPO, administration of intravenous fluids and proton pump inhibitor, and correcting the coagulopathy are the usual steps involved in managing IHE patients [3,7,11]. In our case, antiplatelets were stopped, conservative management was done, and the patient recovered well.

Although IHE is a benign condition with conservative measures being effective, correct diagnosis is crucial as chest pain, which is the common presenting symptom in these patients, may mimic acute myocardial infarction, pulmonary thromboembolism, or aortic dissection. Diagnostic confusion in this condition leads to excessive use of anticoagulant therapy, which may result in life-threatening bleeding [2].

CONCLUSION

Acute onset chest pain is not always due to myocardial infarction. IHE can present with acute onset chest pain and dysphagia. In patients with chest pain and dysphagia, after excluding cardiac causes, evaluation has to be done to figure out any underlying esophageal pathology. Careful history taking, especially the drug history and appropriate investigations, are pivotal as there are high chances of misdiagnosis and unwanted anticoagulant therapy.

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