Spontaneous esophageal hematoma

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Abstract
Spontaneous intramural hematoma of the esophagus constitutes a rare spectrum of esophageal injuries. Chest pain, difficulty swallowing and hematemesis are the most common symptoms. They resolve spontaneously in most cases. Awareness of this condition is a vital guide for following up these cases and for avoiding inappropriate treatment and unnecessary surgical intervention. We report the case of a patient who presented with chest pain and hematemesis.

Key words
Esophagus, spontaneous hematoma, chest pain.

INTRODUCTION
Spontaneous or traumatic intramural esophageal bleeding associated with submucosal dissection is a rare esophageal lesion called esophageal hematoma (1). Chest pain, dysphagia and hematemesis, the most common symptoms, occur in 35% of these cases, but chest pain is difficult to differentiate from pain resulting from other causes (2). Analysis of pathophysiological factors suggests that events which trigger spontaneous hematomas include sudden changes in pressure secondary to swallowing, Valsalva maneuvers, and coughing. Spontaneous hematomas generally occur in patients over 60 years old who are taking antiplatelet or anticoagulant medications or who are undergoing thrombolytic therapy (2, 3). Differential diagnosis in urgent care services must consider acute myocardial heart attack, aortic dissection and aortoesophageal fistula. In most cases bleeding is self-limiting and does not generate hypovolemia, but on rare occasions massive hemorrhaging occurs which affects hemodynamic stability and the patient’s life (4).

CASE PRESENTATION
A 67 year old woman came to the urgent care services at Reina Sofia Hospital in Bogotá because of sudden onset of oppressive retrosternal chest pain. Upon entry to the emergency room the patient experienced several episodes of abundant hematemesis (greater than 500 cc), associated with diaphoresis and hypotension. She required crystalloid revival and monitoring. The patient had a background of controlled type 2 diabetes mellitus, treated hypothyroidism and dyslipidemia. She had had quadrantectomy of her left breast 40 years earlier because of cystadenoma. Her daily intake of medications included 850 mg of metformin, 75 mg of levothyroxine, and 100 mg of aspirin. Physical examination showed that the patient was conscious, well-oriented, and anxious. Her vital signs were: heart rate 100/minute, blood pressure 90/50 mmHg, respiratory rate 20/minute, oxygen saturation was 90% with 28% FIO₂. Patient was pale but without pathological or physical findings indicating cardiopulmonary
auscultation. Paraclinical studies performed at admission showed hemoglobin volume of 14 g/dl, 38% hematocrit, 11,100 leukocytes with 85% neutrophil and 12% lymphocytes, 255,000 platelets, 11 second prothrombin time with 10.6 second control and an INR of 1.03, 1.1 mg/dl creatinine, and 22 mg/dl BUN. After recovering from vomiting blood patient’s hemoglobin volume was 9.5 g/dl and her hematocrit was 30%. High digestive endoscopic found abundant hematic material in the cricopharyngeus with a large pale blue hematoma with pale mucosa distal to the cricopharyngeus. It extended to the esophagogastric junction and reduced the diameter of the opening by 50% (Figure 1). Due to the size of the hematoma and the abundant hematemesis with hemodynamic compromise, a high resolution chest CT scan was requested. It showed an esophageal hematoma compromising the entire length of the esophagus. It partially obstructed the opening of the esophagus and, on the left, compromised the thoracic aorta. Associated vascular pathology was ruled out (Figures 2 and 3). We decided to continue medical treatment but transferred the patient to the intensive care unit (ICU) for hemodynamic monitoring. During her 48 hour stay in the ICU there were no new bleeding episodes or anemia and no blood transfusions were required. A liquid diet was begun on the fourth day after admission. Patient suffered mild dysphagia which improved on the sixth day. The patient was then discharged with scheduled out-patient check up appointments. An esophagastroduodenoscopy performed 6 months after the episode showed scarring at the esophagogastric junction but no functional compromise (Figure 4).

Figure 1. Hematoma in third distal esophagogastric junction.

DISCUSSION

The esophagus is an organ which is susceptible to acute extrinsic injuries resulting from ingestion of foreign bodies,
food impaction, and instrumentation for diagnostic and therapeutic procedures. It is also susceptible to long-standing nasogastric and intrinsic trauma secondary to processes such as retching, nausea, vomiting, belching or coughing (5). Lesions range from mucosal tearing (Mallory-Weiss syndrome) to transmural lacerations (Boerhaave syndrome) and dissecting hematomas (which is the least common of the three). The majority of the reports in the literature are case reports, but there is one systematic review done in 1968 by Jaejun Shim et al. that looks at 119 patients from 87 research reports (1). Among the factors associated with esophageal hematomas are age, chronic use of aspirin and/or anticoagulants, thrombolytic therapy, portal hypertension and a history of sclerotherapy for esophageal variceal bleeding in cirrhotic patients. The pathophysiology starts with submucosal hemorrhaging beginning classically in the distal esophagus because there is less support there from other organs and adjacent tissues. It extends proximally (2). The initial symptom of chest pain must be differentiated from acute myocardial infarct, dissection, aortic rupture with aortoesophageal fistula, perforated peptic ulcers and pancreatitis. The patient's clinical history regarding cardiovascular disease is important. The diagnostic options of choice are esophagogastroduodenoscopy and high resolution CT scans, especially in the case of bleeding. A characteristic finding of endoscopy is a large variable purplish mass with normal-appearing overlying mucosa which partially or totally obstructs the esophageal opening. This indicates a submucosal location of the hematoma and - in cases of bleeding – indicates the rupture and drainage area. Concentric or eccentric thickening of the esophageal wall with well-defined borders and different degrees of extension and obliteration of the light is observed in the CT scan (7). Endoscopic ultrasonography can confirm a submucosal location of the hematoma and can differentiate among extra-esophageal locations especially in the soft tissues of the posterior mediastinum (5, 8). The evolution of esophageal hematomas is usually benign, requiring only support measures and suspension of medication. Follow-up endoscopy is not indicated due to the high risk of rupturing the hematoma. The two main complications are esophageal obstruction with severe dysphagia and spontaneous drainage of the hematoma with massive bleeding which requires endoscopic or surgical intervention (8). Another therapeutic option for cases of massive bleeding when endoscopic treatment fails and surgery has a high risk is angiographic embolization (1). Endoscopic follow-ups 7 to 14 days after have shown ulcers over the involved areas, but in most the cases they produce no scarring or other aftermath visible in 30 day check-ups (10).

CONCLUSION

In cases of acute chest pain differential diagnosis is required. Spontaneous esophageal hematoma should be suspected especially for elderly patients who take aspirin and/or anticoagulants. Performance of high digestive endoscopy and a high resolution CT scan allows confirmation of the diagnosis. For cases of hematemesis they allow the physician to rule out other pathologies that unlike hematoma may require immediate intervention. Nevertheless, the majority of these cases require only conservative handling

REFERENCES