Intramural esophageal hematoma: an unusual cause of acute chest pain

A 79-year-old woman with a previous history of coronary artery bypass grafting presented with acute onset crushing central chest pain at rest. There were no preceding symptoms. On further questioning, the patient reported odynophagia at the time of symptom onset. She was hemodynamically stable with normal examination findings. Given her cardiac risk factors, she was initially treated as having acute coronary syndrome and received standard antiplatelet therapy. Serial electrocardiography and negative troponin test results excluded acute coronary syndrome.

One day after the onset of pain, the patient developed coffee ground vomitus. An urgent esophagogastroduodenoscopy (EGD) showed a posterior esophageal hematoma from 20 cm to the gastro-esophageal junction (Fig. 1). A subsequent contrast-enhanced computed tomography (CT) scan of the thorax showed a distended esophagus containing echogenic material representing intramural hematoma (arrow b) but with no evidence of perforation (Fig. 2). The patient was managed conservatively with intravenous proton pump inhibitor therapy and slow introduction of a soft diet.

Intramural esophageal hematoma (IEH) is an uncommon, but important, cause of acute chest pain. Delayed or misdiagnosis is common resulting in inappropriate antiplatelet therapy. First described in 1968, it is defined as hemorrhage between the esophageal layers of the mucosa and muscularis propria, often involving a long segment of the esophagus [1, 2]. Middle aged and elderly women are at higher risk [3]. Risk factors include Valsalva maneuver, antiplatelet therapy, instrumentation, and trauma. Classic symptoms are acute severe chest pain with associated vomiting, dysphagia or odynophagia [3, 4]. EGD and CT scanning are useful in diagnosing IEH and excluding other pathologies. IEH is often located at the posterior esophagus with EGD showing a typical bluish sub-mucosal hematoma causing a bulging of the overlying mucosa [2–4]. Conservative management consists of proton pump inhibitor therapy, a period of no oral intake followed by the reintroduction of a liquid and subsequently a soft diet [3, 4]. Resolution of IEH occurs over 1–3 weeks (Fig. 3).

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Competing interests: None

Benjamin Robert Disney, Shay-Anne Preece, Saud Ishaq
Department of Gastroenterology, Russells Hall Hospital, Dudley, West Midlands, United Kingdom

Fig. 1 One day after the onset of acute chest pain, a 79-year-old woman developed coffee ground vomitus. Esophagogastroduodenoscopy (EGD) showed a posterior esophageal hematoma.

Fig. 2 A subsequent contrast-enhanced computed tomography (CT) scan of the thorax showed a distended esophagus (arrow a) containing echogenic material representing intramural hematoma (arrow b) but with no evidence of perforation.

Fig. 3 Endoscopic view of the esophagus 12 weeks after initial endoscopy showing full resolution of the intramural esophageal hematoma (IEH).
1 Marks IN, Keet AD. Intramural rupture of the oesophagus. Br Med J 1968; 3: 536–537