Aneurysms of the left gastric and splenic arteries presenting with massive upper gastrointestinal bleeding

Splanchnic artery aneurysms are rare, with an incidence of 0.01 – 0.20 % in routine autopsies [1]. They occur most commonly in the splenic artery (60%) [2]. Left gastric artery aneurysms are extremely rare [3]. Multiple aneurysms are present in approximately a third of patients [4]. Here we describe a case with aneurysms arising from the left gastric and splenic arteries, presenting with massive upper gastrointestinal bleeding. A 73-year-old man presented with an acute episode of hematemesis. He denied use of medications, including steroids, analgesics, and herbal or antiplatelet drugs. At admission, his heart rate was 130 beats/min and blood pressure was 97/61 mmHg. Laboratory data showed severe anemia (Hb 76 g/L). Emergency esophagogastroduodenoscopy revealed an elevated mass lesion over the lesser curvature of the cardiac area, measuring 35 mm, with a central ulcer with adherent blood clot, recognized as a bleeder (Fig. 1). Another elevated mass lesion with intact mucosa was found over the cardiac area, measuring 55 mm. Contrast-enhanced computed tomography (CT) of the abdomen revealed a 40 mm × 40 mm left gastric artery aneurysm with thrombus abutting the lesser curvature of the stomach and a 55 mm × 50 mm splenic artery aneurysm with thrombus at the splenic hilum and abutting the stomach (Fig. 2a). CT angiography disclosed the aneurysms originating from the left gastric artery and splenic artery (Fig. 2b). The patient underwent splenectomy and local excision of the stomach. Examination of the dissected specimens disclosed two aneurysms measuring 55 mm × 50 mm × 50 mm and 35 mm × 35 mm × 32 mm. Gross examination of the cut surface revealed fresh blood clots in the central space with several old laminated clots in the peripheral areas (Fig. 3). Microscopic findings showed aneurysms with thin walls and large numbers of layered organized and unorganized thrombi. Postoperatively, the patient recovered uneventfully and was discharged on day 21 after admission.

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Fig. 1  Endoscopic view of the stomach showing an elevated mass lesion (diameter 35 mm) over the lesser curvature of the cardiac area. There is an ulcer in the center of the lesion with an adherent blood clot.

Fig. 2  a  Computed tomography (CT) scan of the abdomen showing aneurysms in the left gastric artery (40 mm × 40 mm) with thrombus abutting the lesser curvature of the stomach (arrow) and in the splenic artery (55 mm × 50 mm) with thrombus at the splenic hilum and abutting the stomach (arrowhead).  b  CT angiogram showing the aneurysms originating from the left gastric (arrow) and splenic (arrowhead) arteries.

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Fig. 3 The cut surface of the splenic artery aneurysm measured 55 mm × 50 mm × 50 mm. Fresh blood clots in the center of the aneurysm are surrounded by old laminated blood clots.