

# A rare case of hemobilia associated with aneurysms of the celiac trunk, the hepatic artery, and the splenic artery

A 49-year-old woman presented with acute gastrointestinal hemorrhage. She had a history of a melena with negative gastroscopy and colonoscopy examinations. On admission, her hemoglobin level was 9.4 g/dl, and the indices of cholestasis and hepatic cytolysis were normal. Urgent gastroscopy revealed fresh blood in the duodenum without a clear source of bleeding, but subsequent duodenoscopy showed evidence of active bleeding from the papilla of Vater (Figure 1). Abdominal computed tomography revealed a large thrombosed aneurysm of the splenic artery associated with aneurysms of the celiac trunk and of the common hepatic artery (Figure 2). The melena persisted and so angiography was performed, which confirmed the presence of the three aneurysms (Figure 3). Embolization was performed by the insertion of 38 metallic coils in the splenic artery, the gastric artery, and the celiac trunk. The aneurysms thrombosed completely, as shown in the angiographic control 2 weeks later (Figure 4). The patient recovered well and was discharged 1 week later. No further bleeding was observed over 5 months of follow-up.

Hemobilia usually presents with melena (90%), hematemesis (72%), upper abdominal pain (71%), or obstructive jaundice (60%); the classic triad of bleeding, pain, and obstructive jaundice occurs in about 22% of cases [1]. Our patient presented mainly with melena. In around 10% of patients with hemobilia, the condition is secondary to ruptured hepatic artery aneurysms [2]. Splenic artery aneurysm is the most common visceral artery aneurysm (60%); the incidence of hepatic artery aneurysm is 20% and the incidence of celiac artery aneurysm is 4% [3].

Upper gastrointestinal endoscopy is often negative in cases of hemobilia because of the intermittent nature of the bleeding. However, duodenoscopy reveals positive findings in more than 50% of cases [4],

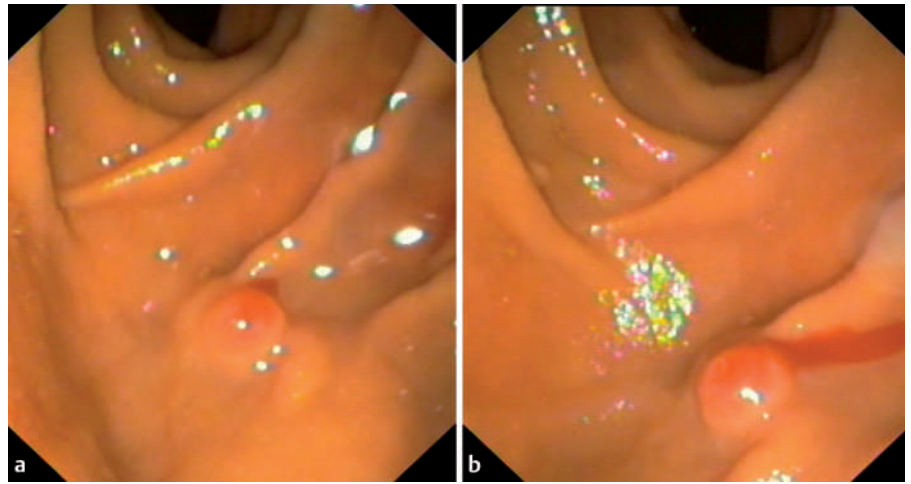


Figure 1 Duodenoscopy was performed with a lateral-viewing endoscope and showed evidence of active bleeding from the papilla of Vater (a, b).

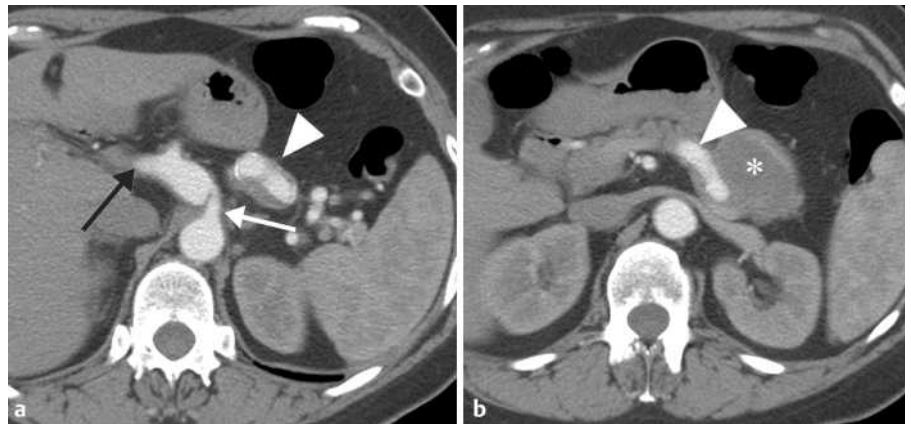


Figure 2 Abdominal computed tomographic scans after injection of a contrast agent. **a** This view shows an aneurysm of the celiac trunk with a neck about 2 cm in length (white arrow); an aneurysm of the common hepatic artery, which was obstructed at its origin (black arrow); and an aneurysmal sac located

in the splenic arterial tract (white arrowhead). **b** This view shows the splenic artery aneurysm (white arrowhead), which was dilated to a maximum diameter of 50 mm because of a large intraluminal thrombus (asterisk).

and selective superior mesenteric angiography can both localize the origin of the bleeding and provide an opportunity for arterial embolization with few complications [5].

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**Figure 3** Selective superior mesenteric artery angiography showed the obstruction of the common hepatic artery (white arrowhead), the aneurysmal dilatation of the celiac trunk (black arrowhead), and parietal alterations of the splenic artery (white arrow) caused by the presence of the aneurysm.



**Figure 4** Post-embolization selective superior mesenteric artery angiography demonstrated the revascularization of the hepatic artery proper (black arrow) through the gastroduodenal artery (white arrowhead), with inverted flow coming off the superior mesenteric artery (white arrow). The image also shows the metallic coils in the celiac and splenic arteries (black arrowheads).

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## References

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