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Gastrointestinal Bleeding of Unknown Origin in Patients with Splenic Aneurysm

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Quiz

A 57-year-old woman was admitted to the hospital with melena and dyspnea. Her initial hemoglobin level was 6.5 g/dL. She had a history of acute pancreatitis with splenic pseudoaneurysm, which had been treated with angiographic coil embolization 1 year previously. After transfusion of several packs of red blood cells and tests for anemia, she underwent endoscopic examination. The colonoscopy findings were nor-

mal. Gastroscopic examination revealed blood in the second and third portions of the duodenum and suspicious active bleeding from the orifice of the ampulla of Vater (Fig. 1A-C). Because the bleeding focus was not clear, computer tomography (CT) scans and capsule endoscopy were performed. There was no evidence of bleeding in the small bowel during capsule endoscopy; however, CT scans revealed parenchymal swelling and an early enhancing lesion in the pancreatic uncinate process (Fig. 1D, E). What is the most likely diagnosis?

Fig. 1. (A-C) Gastroscopy demonstrating blood in the duodenum and suspicious active bleeding from the orifice of ampulla of Vater. (D-E) Contrast-enhanced computed tomography demonstrating parenchymal swelling and an early enhancing lesion of the uncinate process of the pancreas.

Received: February 27, 2021 Revised: March 6, 2021

Accepted: March 6, 2021

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Fig. 2. (A) Celiac angiography shows a splenic artery pseudoaneurysm at the splenic hilum. (B) Surgical specimen demonstrates pseudoaneurysm with blood at splenic hilum.

Answer

Given the focal early enhancing lesion in the pancreatic uncinat process, which was thought to reflect recent bleeding, hemosuccus pancreaticus was suspected. After CT scans, the patient underwent angiography but failed to receive additional embolization due to the previous coil (Fig. 2A). She finally underwent laparoscopic distal pancreatectomy because of the recurrent bleeding; the surgical specimen revealed a pseudoaneurysm at the splenic hilum (Fig. 2B).

Hemosuccus pancreaticus

Hemosuccus pancreaticus refers to bleeding from the pancreatic duct and is a rare cause of gastrointestinal bleeding.¹ It is most often found in patients with pancreatic tumors, pancreatitis, or pseudocysts. Bleeding occurs when surrounding vessels are eroded, and there is direct communication with the pancreatic duct. The most commonly involved vessel is the splenic artery.¹ It is often very aggressive and sometimes life-threatening.

Clinically, it must be suspected when upper gastrointestinal bleeding occurs and pancreatic injury is present. The best diagnostic modality is usually cross-sectional imaging, such as abdominal CT and/or magnetic resonance cholangiopancreatography. Endoscopic retrograde cholangiopancreatography may also be used for diagnosis.²⁻⁴

Arteriography with coil embolization is usually the preferred

treatment for acute bleeding control.^{3,4} If bleeding persists or is massive, the treatment of choice is surgery with ligation of the bleeding vessel, which definitively prevents rebleeding.^{5,6}

Conflicts of Interest

The author has no potential conflicts of interest.

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REFERENCES

1. Anil Kothari R, Leelakrishnan V, Krishnan M. Hemosuccus pancreaticus: a rare cause of gastrointestinal bleeding. *Ann Gastroenterol* 2013;26:175-177.
2. Suter M, Doenz F, Chapuis G, Gillet M, Sandblom P. Haemorrhage into the pancreatic duct (Hemosuccus pancreaticus): recognition and management. *Eur J Surg* 1995;161:887-892.
3. Risti B, Marincek B, Jost R, Decurtins M, Ammann R. Hemosuccus pancreaticus as a source of obscure upper gastrointestinal bleeding: three cases and literature review. *Am J Gastroenterol* 1995;90:1878-1880.
4. Lermite E, Regenet N, Tuech JJ, et al. Diagnosis and treatment of hemosuccus pancreaticus: development of endovascular management. *Pancreas* 2007;34:229-232.
5. Arnaud JP, Bergamaschi R, Serra-Maudet V, Casa C. Pancreatoduodenectomy for hemosuccus pancreaticus in silent chronic pancreatitis. *Arch Surg* 1994;129:333-334.
6. Wagner WH, Cossman DV, Treiman RL, Foran RF, Levin PM, Cohen JL. Hemosuccus pancreaticus from intraductal rupture of a primary splenic artery aneurysm. *J Vasc Surg* 1994;19:158-164.