

BRIEF REPORT

Acute pancreatitis complicated with peripancreatic pseudoaneurysm and subsequent intra-abdominal hematoma

Hsueh-Chien Chiang,  Yi-Ning Lo, Chiung-Yu Chen, Chiao-Hsiung Chuang, Tzu-Chun Hong  and Hsin-Yu Kuo 

Department of Internal Medicine, National Cheng Kung University Hospital, College of Medicine, National Cheng Kung University, Tainan, Taiwan

Key words

acute pancreatitis, inferior pancreaticoduodenal artery, intra-abdominal hematoma, peripancreatic pseudoaneurysm.

Accepted for publication 19 March 2023.

Correspondence

Hsin-Yu Kuo, Department of Internal Medicine, National Cheng Kung University Hospital, No.138, Sheng Li Road, Tainan 704, Taiwan.
Email: telomere-aging@hotmail.com.tw

Hsueh-Chien Chiang and Yi-Ning Lo contributed equally to this work.

Declaration of Conflict of interest: The authors declare no conflict of interest.

A 69-year-old woman was admitted to our hospital with abdominal pain and nausea for 2 days. Her vital signs were stable apart from a minor increase in temperature (37.1°C). Blood tests revealed an elevated serum lipase of 2111 U/L and a normal hemoglobin of 11.8 g/dl. She was treated with intravenous fluids and analgesics. On the day following admission, she developed more prominent abdominal pain associated with tachycardia. There was no history of melena, but her hemoglobin had fallen to 8.0 g/dl. An ultrasound study revealed a heterogeneous mass, 8 cm in diameter, in the peripancreatic area. A computed tomography (CT) scan confirmed an intra-abdominal hematoma with a probable aneurysm of the inferior pancreaticoduodenal artery (Fig. 1). The presence of an aneurysm was confirmed by mesenteric angiography, and she was treated by the placement of two microcoils in the inferior pancreaticoduodenal artery (Fig. 2). This improved her vital signs and there was no further fall in hemoglobin. However, upper gastrointestinal endoscopy was subsequently performed because of persistent nausea. There was narrowing of the second part of the duodenum related to external compression (Fig. 3). This was treated by the placement of a nasojejunal tube. Nausea improved and enteral feeding was resumed.

Pancreatic pseudoaneurysm is a rare but potentially lethal complication of pancreatitis. The aneurysm develops because of severe inflammation as well as the corrosive effects of pancreatic juice on the vascular walls.^{1,2} These

pseudoaneurysms may rupture with bleeding into the gastrointestinal (GI) tract or the peritoneal cavity. Some episodes of bleeding into the GI tract occur because of bleeding through the main pancreatic duct, a condition sometimes called hemossuccus pancreaticus.³ In contrast, those with bleeding

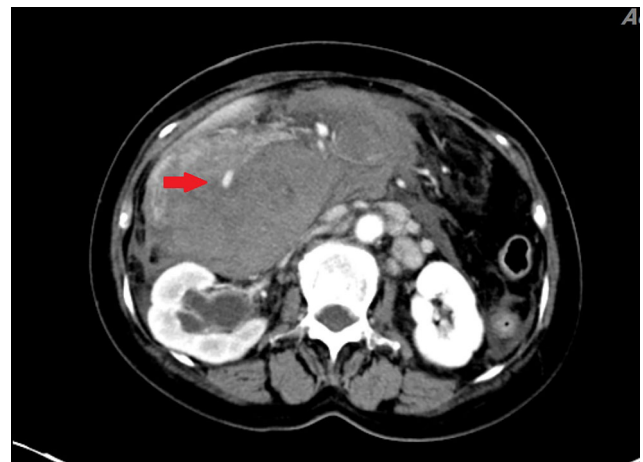


Figure 1 A computed tomography scan confirming an intra-abdominal hematoma with a probable aneurysm of the inferior pancreaticoduodenal artery.

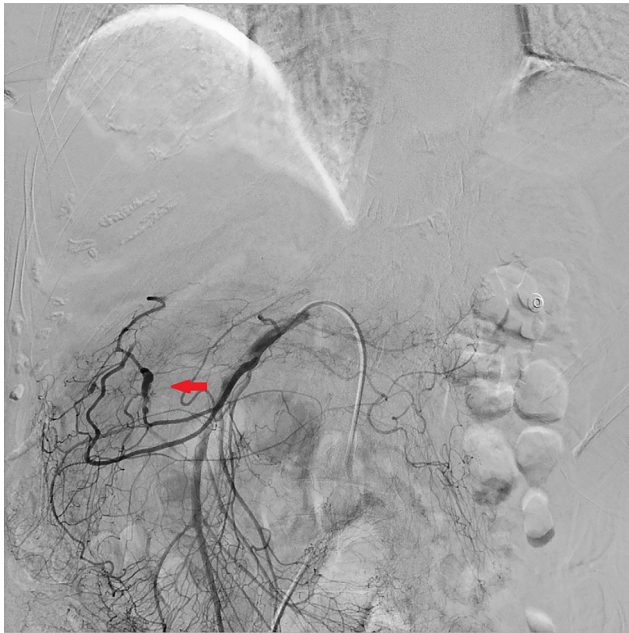


Figure 2 Mesenteric angiography confirming an aneurysm, which was treated by the placement of two microcoils in the inferior pancreaticoduodenal artery.

into the peritoneal cavity usually present with abdominal pain and unstable vital signs.¹

Pancreatic pseudoaneurysm commonly involves the splenic artery, gastroduodenal artery, or the inferior pancreaticoduodenal artery. The diagnosis can be challenging in patients without hematochezia or melena. An ultrasound study is helpful for confirming a hematoma, but additional information can often be obtained by CT angiography. Mesenteric angiography confirms the presence of an aneurysm and provides an opportunity for transarterial embolization.^{1,4} If this fails, open surgery becomes the salvage option.

Pseudoaneurysms can occur in both acute and chronic pancreatitis. In our patient, this was her first episode of pancreatitis, and a pseudoaneurysm with bleeding occurred relatively early after

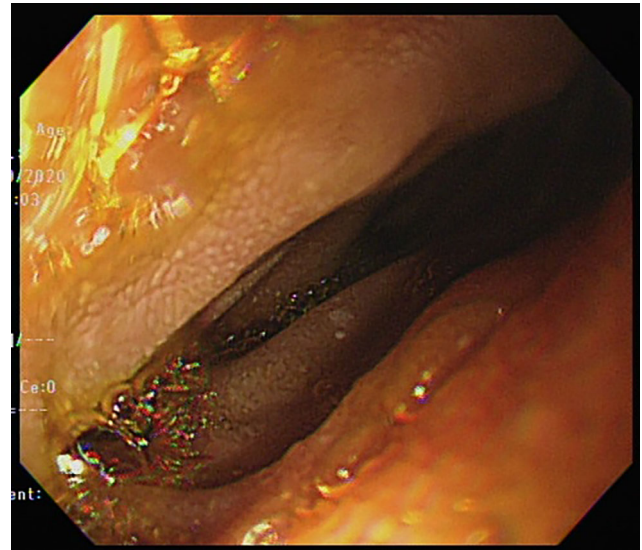


Figure 3 Esophagogastroduodenoscopy showing the narrowing of the second part of the duodenum related to external compression.

admission to the hospital. Recognition of this rare but potentially fatal complication can be life-saving in clinical practice.

References

- 1 Pang TC, Maher R, Gananadha S, Hugh TJ, Samra JS. Peripancreatic pseudoaneurysms: a management-based classification system. *Surg. Endosc.* 2014; **28**: 2027–38.
- 2 Chowdhury MM, Quiyum MA, Mohammed S, Karim R. Hemosuccus pancreaticus: a rare cause of gastrointestinal bleeding. *Mymensingh Med. J.* 2022; **31**: 872–5.
- 3 Yu P, Gong J. Hemosuccus pancreaticus: a mini-review. *Ann. Med. Surg.* 2018; **28**: 45–8.
- 4 Dhali A, Ray S, Sarkar A *et al.* Peripancreatic arterial pseudoaneurysm in the background of chronic pancreatitis: clinical profile, management, and outcome. *Updates Surg.* 2022; **74**: 1367–73.