A case of delayed bleeding 9 days after endoscopic ultrasound-guided pancreatic pseudocyst drainage

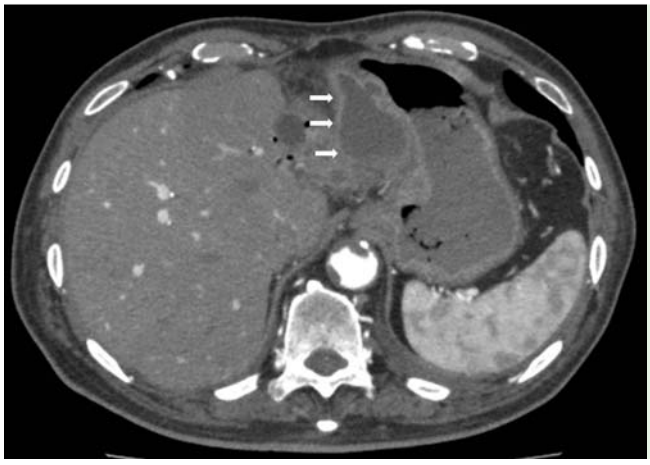
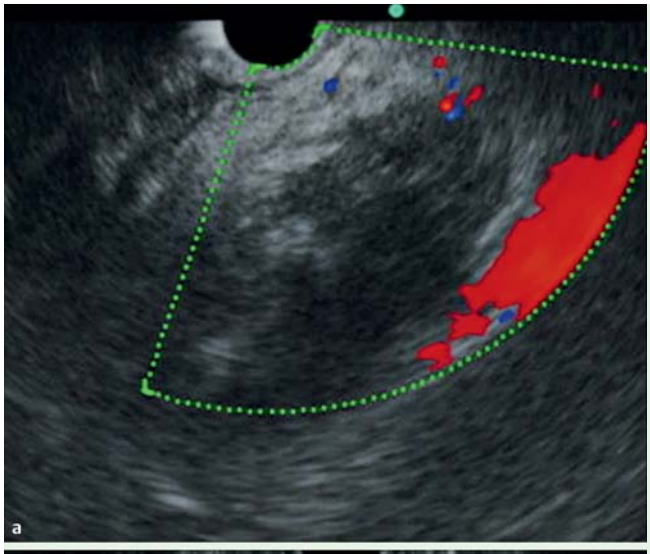


Fig. 1 Computed tomography scan showed a 68-mm multilocular pancreatic pseudocyst (arrow) in contact with the stomach and pancreas.



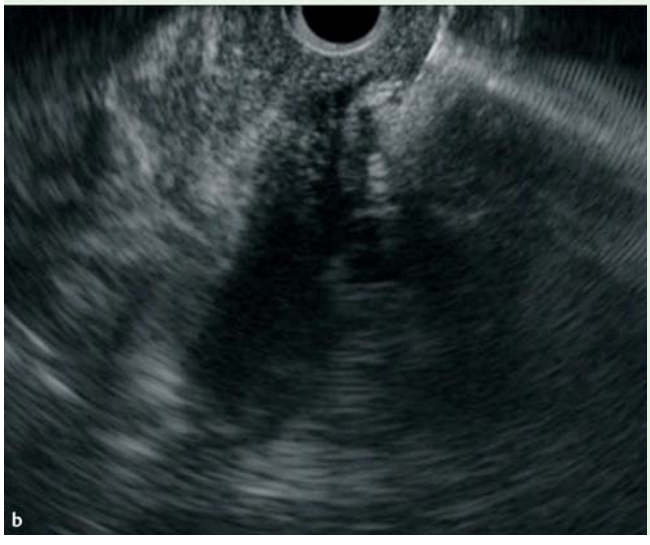


Fig. 2 Puncture of the pancreatic pseudocyst. **a** The color Doppler function confirmed the absence of intervening blood vessels in the puncture line. **b** The pseudocyst was punctured with a 19-G needle under endoscopic ultrasound guidance.

Endoscopic ultrasound-guided pancreatic pseudocyst drainage (EUS-PPD) has become a safe and effective procedure for pancreatic pseudocysts. However, post-procedural complication rates of 8.5%–20% have been reported [1–4]. For delayed complications, only one case of bleeding, which occurred 23 days after EUS-PPD from the transjejunal approach, has been reported [5]. We report a case of bleeding 9 days after EUS-PPD from the transgastric approach.

A 79-year-old man was admitted to our hospital for the treatment of biliary pancreatitis. Heparin was administered because of a history of myocardial infarction. A bile duct stone was successfully removed, but pseudocyst formation occurred (**Fig. 1**). After 36 days, pseudocyst infection was suspected and EUS-PPD was performed. Heparin was stopped only on the day of the EUS-PPD procedure. Before puncturing the pseudocyst, the absence of intervening blood vessels was confirmed using the color Doppler function (**Fig. 2a**). The pseudocyst was punctured with a 19-G needle (Sonotip; Medi-Globe GmbH, Rosenheim, Germany) under EUS guidance (**Fig. 2b**). Then, an electrical cautery needle (Cyst-Gastro set; ENDO-FLEX GmbH, Voerde, Germany) was used to dilate the gastric and cystic wall. Finally, a 5-Fr nasocatheter was inserted into the pseudocyst.

There were no procedure-related adverse events and the symptoms disappeared. Although the serum hemoglobin level did not drop markedly (Day 1: 12.0 mg/dL; Day 8: 11.7 mg/dL), hematemesis was observed 9 days after EUS-PPD and the hemoglobin level dropped to 6.9 mg/dL. Emergency endoscopy showed abundant clots around the pseudocyst fistula (**Fig. 3a, b**). Angiography showed no aneurysms or contrast medium extravasation (**Fig. 4**).

The late bleeding was possibly caused by the physical stimulus from the inserted stent which caused intracystic mural vessel destruction; the antithrombotic treatment might have been a contributing factor. To our knowledge, this is the first case of delayed bleeding 9 days after EUS-PPD. Sufficient long-term care must be provided after EUS-PPD, particularly in patients receiving antithrombotic treatment.

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Competing interests: None

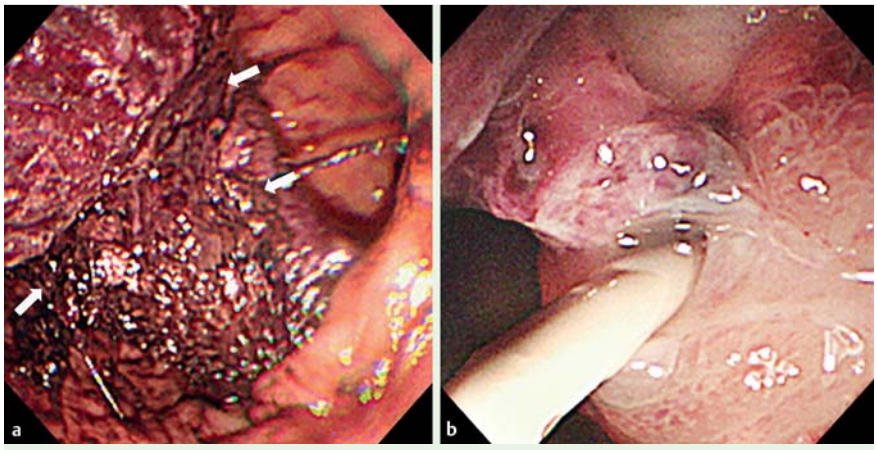

Fig. 3 Emergency endoscopy findings. **a, b** Abundant clots (arrow) were found around the pseudocyst fistula.

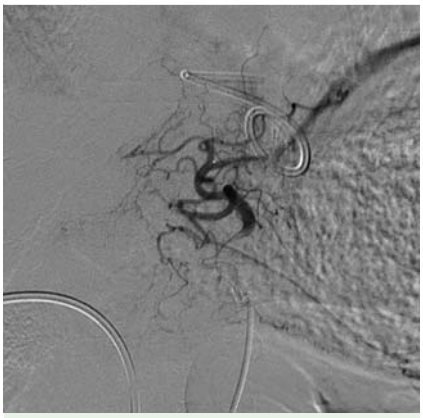

Fig. 4 Angiography showed no aneurysms or contrast medium extravasation.

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