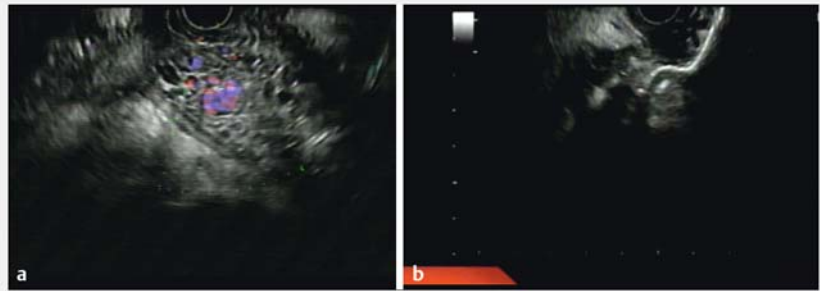


## Hemostatic matrix for treating intracollection bleeding after endoscopic ultrasound-guided drainage and endoscopic necrosectomy of walled-off pancreatic necrosis in a patient with cirrhosis

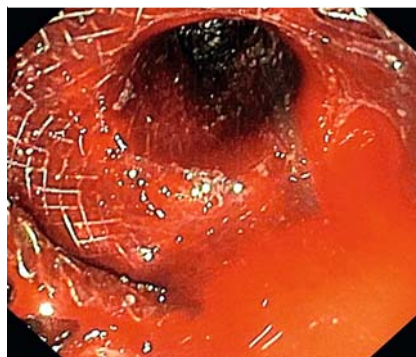
A 45-year-old man with alcoholic liver cirrhosis was referred to our institute for treatment of infected walled-off pancreatic necrosis (WOPN) 6 months after an episode of acute pancreatitis. Computed tomography confirmed cirrhotic liver disease with collateral vessels and a pancreatic fluid collection at the body-tail (9×3 cm). Laboratory tests showed low platelets (55 000/mm<sup>3</sup>) and international normalized ratio of 1.5. Endoscopic ultrasound (EUS) evaluation showed perigastric collateral circulation and a WOPN with necrotic material accounting for 90% of the total volume (► **Fig. 1**).

We performed EUS-guided drainage of the collection by deploying a lumen-apposing metal stent (LAMS; type HOT-AXIOS, 10 mm length, 20 mm diameter; Boston Scientific, Marlborough, Massachusetts, USA) with creation of a cysto-gastrostomy, which was dilated to 20 mm using a balloon. During the same session, we performed necrosectomy using forceps and endoscopic snare, during which spurting bleeding suddenly occurred from a vessel in the wall (► **Fig. 2**); hemostasis was achieved immediately by using a metal clip.

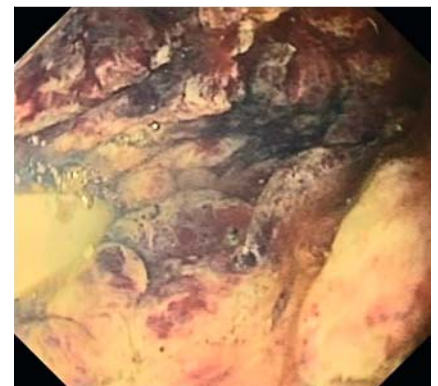
The patient was closely monitored until he underwent further necrosectomy sessions, with gradual improvement in clinical, laboratory, and endoscopic status. At the fourth necrosectomy session, we cleaned the cavity by removing the residual necrotic material and observed granulation tissue on the wall; however, a wide area of the collection showed oozing bleeding, so we decided to apply a hemostatic agent (PuraStat; 3-D Matrix Medical Technology, Tokyo, Japan) into the cavity, next to the damaged wall, which immediately stopped the bleeding (► **Fig. 3**, ► **Video 1**). We kept the LAMS in place for a further 48 hours in case of



► **Fig. 1** Endoscopic ultrasound view of the walled-off pancreatic necrosis (WOPN). **a** Before deployment of the lumen-apposing metal stent (LAMS), color Doppler showed a tight relationship between collateral vessels into the cavity and the WOPN. **b** During LAMS deployment.



► **Fig. 2** Endoscopic view of bleeding during the first necrosectomy session.



► **Fig. 3** Endoscopic view during the last necrosectomy session while deploying the hemostatic matrix. No more bleeding was seen from the wall of the collection.

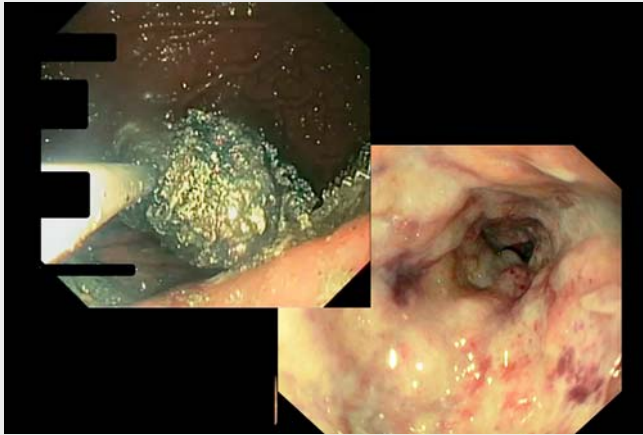
rebleeding, and after an endoscopy to check the area, we removed it.

The patient's clinical and laboratory indices improved, and he was discharged 24 hours after LAMS removal. After 2 months of follow-up he had no complaints or symptoms. To our knowledge, this is the first case report of hemostatic matrix application as a single agent for treatment of intracollection bleeding following necrosectomy in a patient with liver cirrhosis.

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**Video 1** Endoscopic ultrasound-guided drainage of walled-off pancreatic necrosis, with management of intracavity bleeding using a hemostatic matrix, in a patient with cirrhosis.

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## Competing interests

The authors declare that they have no conflict of interest.

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## Bibliography

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