

## Endoscopic treatment of walled-off pancreatic necrosis by simultaneous transgastric and retroperitoneal approaches

Infected walled-off pancreatic necrosis (WOPN) is a severe complication of acute pancreatitis. In cases of extensive WOPN developing away from the stomach wall, endoscopic treatment may not be effective [1]. A complementary treatment by percutaneous drainage can be performed, allowing retroperitoneal access [2, 3]. We report the case of a large and

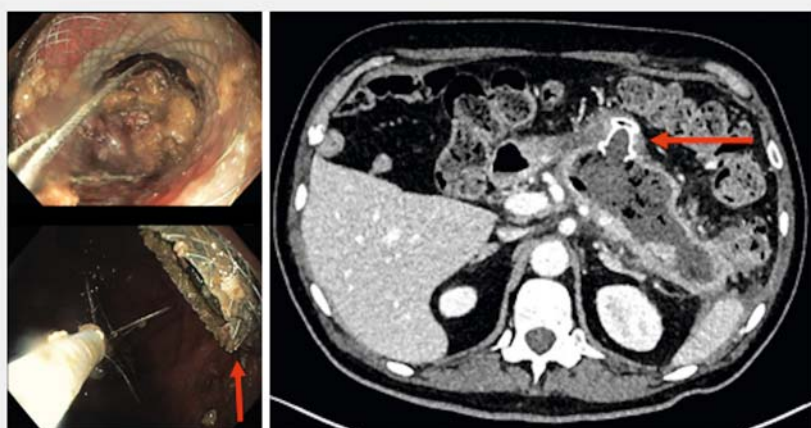
complicated infected WOPN, successfully treated by an innovative double endoscopic necrosectomy approach, associating simultaneous transgastric and retroperitoneal endoscopic necrosectomy.

A 72-year-old man presented with severe acute biliary pancreatitis. He developed a symptomatic infected WOPN, mainly lo-

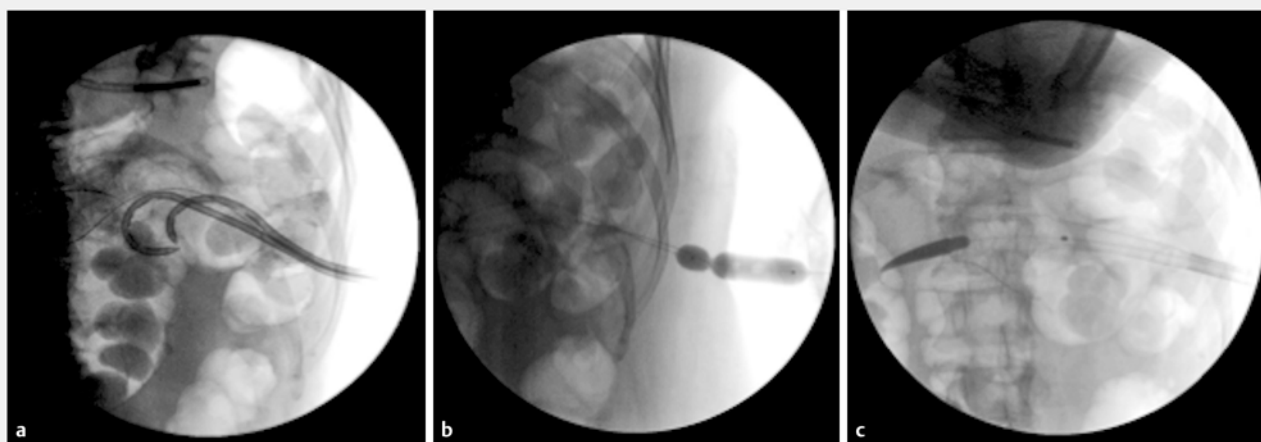
cated in the retroperitoneum quite far from the gastric wall.

First, endoscopic ultrasound-guided transgastric drainage with a lumen-apposing metal stent (LAMS-Axios, diameter 20 mm, length 10 mm; Boston Scientific, Marlborough, Massachusetts, USA) was performed. Indeed, endoscope access was difficult because of the angulated position of the scope and the presence of necrosis far away from the stomach (► Fig. 1).

Second, after five sessions with persistent necrosis, retroperitoneal access was decided. Retroperitoneal percutaneous drainage focused on the posterior wall of the WOPN was performed, placing two 10-Fr drainage tubes under computed tomography guidance. After 4 days, the tubes were removed, thus creating an artificial fistula. The cutaneous orifice was immediately dilated and a partially covered esophageal metal stent (Evolution, diameter 220 mm, length 90 mm; Cook Medical, Limerick, Ireland) was placed to create a wide-bore percutaneous fistula (► Fig. 2).



► Fig. 1 Endoscopic necrosectomy sessions by transgastric drainage with a lumen-apposing metal stent (red arrow).



► Fig. 2 Percutaneous drainage of the walled-off pancreatic necrosis. **a** Previous percutaneous drainage by two 10-Fr radiologic drains. **b** Dilation of the fistula with a hydrostatic balloon. **c** A wide-bore fistula was created by an esophageal, partially covered, self-expandable metal stent.

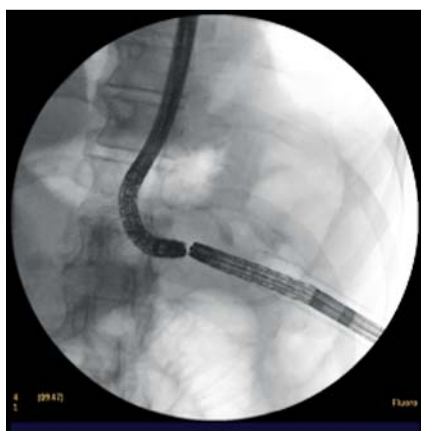
## Endoscopic treatment of walled-off pancreatic necrosis by simultaneous transgastric and retroperitoneal approaches

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**Video 1** Simultaneous transgastric and retroperitoneal endoscopic treatment of walled-off pancreatic necrosis.



**Fig. 3** Double endoscopic approach by transgastric and percutaneous access.

Once created, the fistula allowed multi-disciplinary techniques such as insertion of surgical clamps under endoscopic guidance, and simultaneous endoscopic necrosectomy through both percutaneous and transgastric access (► **Fig. 3**, ► **Video 1**).

Complete resolution of the WOPN was obtained after two sessions. Between the two procedures, the esophageal

stent and LAMS remained in position. They were removed at the end of the second session and a surgical drain was placed and removed progressively to allow fistula healing. The enterocutaneous fistula was closed after 2 weeks and the patient recovered completely.

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### Competing interests

None

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