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

Enrique Pérez-Cuadrado-Robles¹, Arthur Berger¹, Guillaume Perrod¹, Emilia Ragot², Charles André Cuenod³, Gabriel Rahmi¹, Christophe Cellier¹.

Department of Gastroenterology¹, Surgery² and Radiology³. Georges-Pompidou European Hospital. Paris, France.

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.

Endoscopy_UCTN_Code_TTT_1AR_2AI

Competing interests

None

The authors

Enrique Pérez-Cuadrado-Robles¹, Arthur Berger¹, Guillaume Perrod¹, Emilia Ragot², Charles André Cuenod³, Gabriel Rahmi¹, Christophe Cellier¹

- 1 Department of Gastroenterology, Georges Pompidou European Hospital, Paris, France
- 2 Department of Surgery, Georges Pompidou European Hospital, Paris, France
- 3 Department of Radiology, Georges Pompidou European Hospital, Paris, France

Corresponding author

Arthur Berger, MD, PhD

Department of Gastroenterology, Georges Pompidou European Hospital, 20 rue Leblanc, 75015 Paris, France
Fax: +33-1-56092914
arthur.berger.bx@gmail.com

References

- [1] Bang JY, Arnoletti JP, Holt BA et al. An endoscopic transluminal approach, compared with minimally invasive surgery, reduces complications and costs for patients with necrotizing pancreatitis. *Gastroenterology* 2019; 156: 1027–1040
- [2] Laopeamthong I, Tonzuka R, Kojima H et al. Percutaneous endoscopic necrosectomy using a fully covered self-expandable metal stent in severe necrotizing pancreatitis. *Endoscopy* 2019; 51: E22–E23
- [3] Seifert H, Wehrmann T, Schmitt T et al. Retroperitoneal endoscopic debridement for infected peripancreatic necrosis. *Lancet* 2000; 356: 653–655

Bibliography

DOI <https://doi.org/10.1055/a-1011-3555>

Published online: 27.9.2019

Endoscopy 2020; 52: E88–E89

© Georg Thieme Verlag KG

Stuttgart · New York

ISSN 0013-726X

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>

Endoscopy E-Videos is a free access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online.

This section has its own submission website at <https://mc.manuscriptcentral.com/e-videos>