Endoscopic necrosectomy using electric conductivity: anchoring the snare tip into a groove made with Endocut may improve necrosis grasping

Around 20–30% of all acute cases of pancreatitis are necrotizing, further marred by a 10–20% mortality rate [1]. Walled-off pancreatic fluid or necrotic collections can lead to complications such as compression or secondary infection. In these cases, a step-up approach is recommended [2,3] instead of open surgery, first with decompression by cystogastrostomy for fluid collection, followed by an endoscopic necrosectomy if solid components remain in the drained collection. However, endoscopic necrosectomy is quite a frustrating procedure because only small amounts of necrotic tissue are removed with each pass. Indeed, there is no specific tool and the handle slides above the necrosis. Evaluation of the recent approaches with the Endorotor to remove the necrosis are still ongoing, but this technique is also time-consuming [4].

We report the case of a 67-year-old woman, hospitalized for biliary Balthazar E acute pancreatitis with several necrotic collections. At day 17, a secondary infection developed and an AXIOS stent was used to drain the collection.

However, at day 23, sepsis was still not controlled, and a computed tomography (CT) scan revealed remaining solid components in the collection. During the necrosectomy, we tried to improve grasping by making grooves in the necrosis with the tip of the snare. Surprisingly, despite the necrotic tissue, conductivity was maintained using Endocut electric current (Erbe, Tuebingen, Germany), and the tip of the snare could be used to cut and dissect the necrosis (►Fig. 1, ►Video 1). Thanks to this ability, we managed to cut the necrosis into large square pieces, facilitating snare placement in the groove in order to grasp larger pieces without sliding (►Fig. 2).

►Fig. 1 Aspect of necrosectomy procedure. **a** Groove incision with the tip of the snare. **b** Snare placement into the groove. **c** Snare grasping. **d** Removal of the piece of necrosis.

►Video 1 Endoscopic necrosectomy using conductivity: anchoring the snare tip into a groove made with electric current may improve necrosis grasping.

► **Fig. 2** Computed tomography (CT) scan of the pancreatic necrosis before and after necrosectomy. **a** CT scan with large necrotic collection before any drainage. **b** CT scan after AXIOS drainage. **c** CT scan immediately after necrosectomy. **d** CT scan after 1 month and double pigtail stent replacement of the diabolo stent.

To the best of our knowledge, there is no really efficient method for endoscopic necrosectomy. Necrosis conductivity can be used to create grooves to facilitate snare grasping to remove larger pieces. A comparison with the Endorotor strategy is mandatory to choose the safer and more efficient strategy.

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Competing interests

The authors declare that they have no conflict of interest.

The authors

Alexiane Delmeule¹, Jérémie Jacques², Thomas Lambin¹, Frédéric Moll¹, Alexandru Lupu¹, Sanaa Brahmia¹, Mathieu Pioche¹

- 1 Endoscopy and Gastroenterology Unit, Edouard Herriot Hospital, Hospices Civils de Lyon, Lyon, France
- 2 Gastroenterology and Endoscopy Unit, Dupuytren University Hospital, Limoges, France

Corresponding author

Mathieu Pioche, MD

Endoscopy unit – Digestive Disease Department, Pavillon L – Edouard Herriot Hospital, 69437 Lyon Cedex, France
Fax: +33-4-72-11-01-47
mathieu.pioche@chu-lyon.fr

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