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 Endorot 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 AXIOM 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).
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.

References


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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.