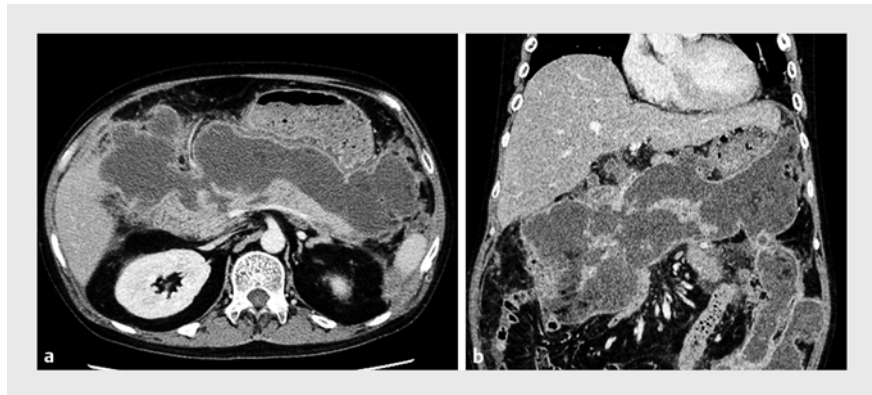


On-and-off deployment technique of a lumen-apposing metal stent during endoscopic pancreatic necrosectomy

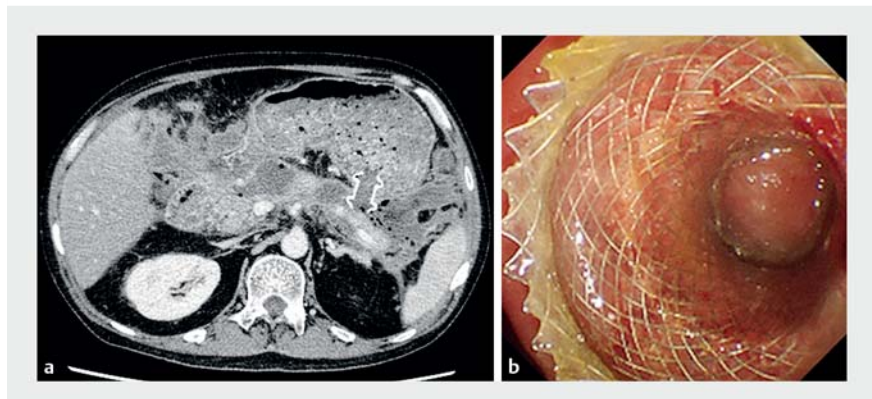
Endoscopic ultrasound-guided transmural drainage (EUS-TMD) with lumen-apposing metal stent (LAMS) and endoscopic necrosectomy are widely recognized as effective treatments for walled-off pancreatic necrosis (WON) [1–3]. However, in particular situations, the LAMS becomes an unexpected encumbrance to endoscopic necrosectomy. Moreover, necrosectomy devices sometimes catch the LAMS incidentally, which might result in LAMS migration.

A 35-year-old man underwent EUS-TMD with a 15 × 10 mm LAMS (AXIOS; Boston Scientific, Marlborough, Massachusetts, USA) for lateral widespread and irregular-shaped WON caused by necrotizing pancreatitis (► Fig. 1). On initial necrosectomy, the distal end of the LAMS was clogged by the opposite wall, and WON access was tightly obstructed, resulting in failure of endoscopic trans-LAMS advancement to the cavity (► Fig. 2). To open the route, the LAMS was first removed with a snare, and necrosectomy was performed using 5-prong forceps to grab the larger necrotic tissues. After the session, the LAMS was redeployed with a novel technique to prevent the fistula from closing. Using a 15-mm snare, the distal flange of the LAMS was grasped through the channel of a two-channel gastroscope. The LAMS was then squeezed to load backward into the other channel of the endoscope. The distal flange grasped by the snare was inserted into the WON by cooperative advancement of the snare and a pusher catheter. After full deployment of the proximal flange in the gastric lumen, the grasping snare released the distal flange to complete LAMS redeployment (► Fig. 3, ► Video 1). This “on-and-off” procedure was performed six times in total until endoscopic necrosectomy was accomplished, without any complications.

Temporary removal and redeployment of LAMS during endoscopic necrosectomy offers advantages, both to create a space



► Fig. 1 Contrast-enhanced computed tomography views. **a, b** Widespread and irregular-shaped wall-off necrosis caused by necrotizing pancreatitis.



► Fig. 2 Lumen-apposing metal stent (LAMS) views. **a** Contrast-enhanced computed tomography view showing that, after successful endoscopic ultrasound-guided transgastric drainage, the wall-off necrosis (WON) had partially shrunk, but the distal end of the LAMS was clogged by the opposite wall of the transmural site. **b** Endoscopic image showing the distal end of the LAMS, which was obstructed and clogged, with no route to the WON cavity.

without flange disturbance to insert the endoscope into a burdensome WON, and to obtain larger necrotic tissues by higher grip force devices without interference with the LAMS.

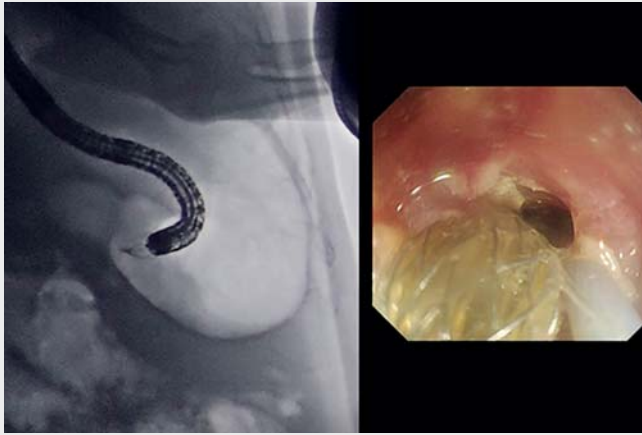
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Competing interests

None



► Fig. 3 Computed tomography view showing the LAMS sitting in the appropriate position after repetitive temporary removal and redeployment.



Video 1 Novel technique of “on-and-off deployment” of a lumen-apposing metal stent for effective endoscopic pancreatic necrosectomy.

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