Safe removal of lumen-apposing metal stent using argon plasma coagulation after EUS-guided cyst gastrostomy (with video)

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A 25-year-old woman was referred to our hospital owing to the development of walled-off necrosis after severe acute pancreatitis [Figure 1]. We performed EUS-guided cyst gastrostomy using a 10 mm × 15 mm lumen-apposing metal stent (LAMS) (Hot Axios; Boston Scientific, Marlborough, MA, US), and direct endoscopic necrosectomy was performed through the LAMS. After 3 weeks, we planned to remove the LAMS; however, the proximal flange was fixed to the gastric wall due to circumferential tissue ingrowth [Figure 2a]. First, we caught the middle portion of the LAMS using a snare; however, removal of the LAMS failed because the proximal flange did not come off the gastric wall. Moreover, the ingrowing tissue began to bleed after snaring. Thereafter, we used argon plasma coagulation (APC) to burn down the ingrowing tissue. The electrical setting of APC was adjusted to 30 W (1.0 L/min of flow) which is lower than that normally used for gastric mucosa. By using such a lower electrical setting, it was possible to easily break only the tissue inside the LAMS while preventing thermal damage of the wire. Circumferential cauterization was achieved in 7

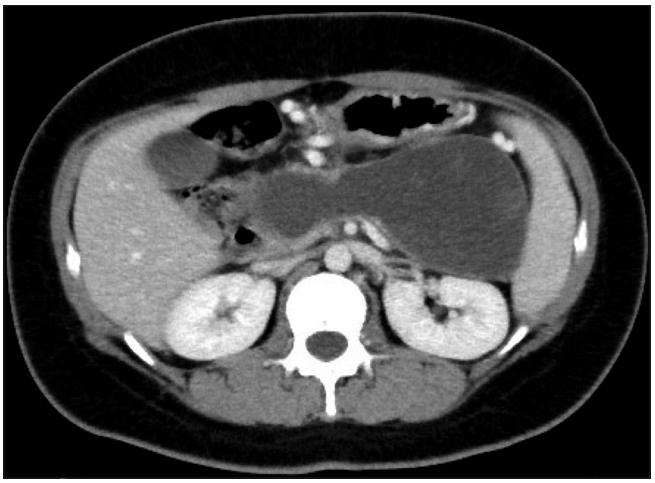

Figure 1. Contrast-enhanced computed tomography showing large walled-off necrosis on the dorsal side of the stomach

Video Available on: www.eusjournal.com

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Website: www.eusjournal.com

DOI: 10.4103/EUS-D-20-00211

How to cite this article: Miwa H, Sugimori K, Tsuchiya H, Nishimura M, Tozuka Y, Kaneko T, *et al*. Safe removal of lumen-apposing metal stent using argon plasma coagulation after EUS-guided cyst gastrostomy (with video). Endosc Ultrasound 2021;10:309-10.

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Received: 2020-09-29; **Accepted:** 2020-11-17; **Published online:** 2021-02-09

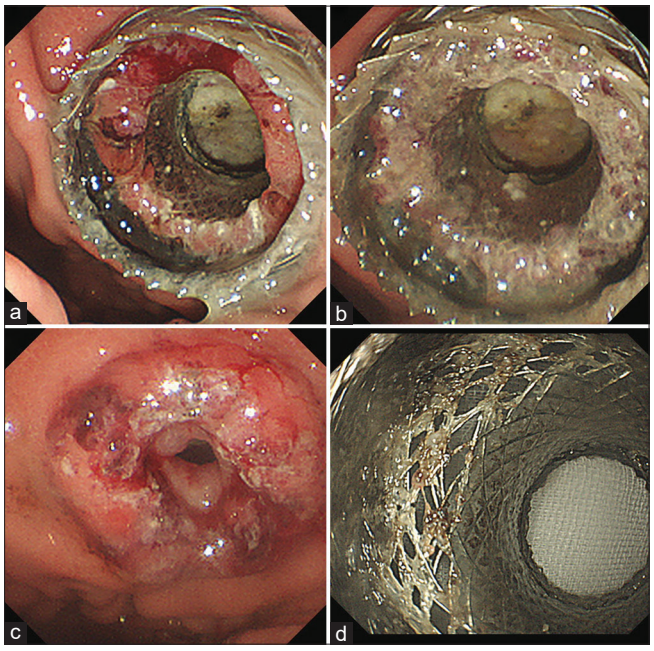

Figure 2. (a) Lumen-apposing metal stent with tissue ingrowth. (b) After argon plasma coagulation, tissue ingrowth completely disappears. (c) After removal of the stent, the fistula does not have any bleeding or perforation. (d) Silicon cover of the lumen-apposing metal stent is broken; however, the wire does not show any thermal change

min [Figure 2b]. Subsequently, the LAMS was again caught using a snare and easily removed by pulling the endoscope [Video 1]. The LAMS was retrieved through the scope, and there was no evidence of bleeding or perforation at the cyst gastrostomy anastomosis [Figure 2c]. The silicon cover of the LAMS was broken at the distal flange [Figure 2d]. The patient was discharged without any complications 2 days after the procedure. LAMS has been widely used for various types of intra-abdominal drainage, including peripancreatic fluid collection;[1,2] however, few cases have reported about difficulty in removal of LAMS.[3-5] To the best of our knowledge, this is first report about removal of LAMS with tissue ingrowth using APC. Lower electrical setting is favorable to break only the tissues inside the LAMS.

Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient has given her consent for her images and other clinical information to be reported in the journal. The patient understands that her name and initials will not be published and due efforts will be made to conceal her identity, but anonymity cannot be guaranteed.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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