Endoscopic drainage of a jejunopancreatic pseudocyst with an electrocautery-enhanced lumen-apposing metal stent

A 30-year-old man who was a known alcoholic drinker (216 g/day) developed acute pancreatitis and a hemothorax after blunt trauma. He subsequently developed severe obstructive symptoms 12 weeks after the injury, which were caused by a 14-cm pancreatic pseudocyst (PPC) in the pancreatic tail, posterior to the transverse mesocolon (Fig. 1). The PPC abutted the proximal jejunum and was not apposed to the stomach, thereby precluding transgastric drainage.

Transluminal PPC drainage was therefore performed with a lumen-apposing metal stent (LAMS) and delivery system (Hot Axios; Boston Scientific, Natick, Massachusetts, USA) under fluoroscopic guidance using a convex-type ultrasound endoscope (GF-UCT260; Olympus, Tokyo, Japan) (Fig. 2). The endoscope was inserted into the jejunum beyond the ligament of Treitz. The PPC was then directly punctured through the jejunal wall under ultrasound guidance with cautery. The fully covered LAMS was inserted and expanded satisfactorily, resulting in massive fluid drainage without intraperitoneal spillage (Fig. 3; Video 1). The procedure took 2 minutes without device exchange. The patient’s obstructive symptoms were relieved after drainage, with the pseudocyst significantly reduced in size (Fig. 4).

The Hot Axios is a novel single-step electrocautery-enhanced delivery system for a LAMS. The diathermic ring at the tip of device enables direct transmural access into a PPC or walled-off necrosis. The deployed fully-covered stent has two large flanges that minimize fluid leakage by compressing the walls of both the intestine and the PPC. Previous reports of PPC drainage have been performed through the stomach or duodenum [1–3]. In this patient, the PPC was posterior to the transverse mesocolon, which precluded transgastric drainage. Successful drainage with a LAMS through the jejunum avoided laparotomy.

To our knowledge, this is the first report of transjejunal PPC drainage and it may be a viable option to treat patients with a PPC without going through the stomach. Further large studies are necessary to confirm the safety of transluminal jejuno-cystic drainage.
Competing interests

None

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Video 1 Transluminal pancreatic pseudocyst drainage via the jejunum using single-step electrocautery-enhanced delivery of a lumen-apposing metal stent.