Endoscopic ultrasound-guided gastroenterostomy using a lumen-apposing self-expanding metal stent for decompression of afferent loop obstruction

Acute afferent loop syndrome following pancreaticoduodenostomy is generally caused by mechanical occlusion due to pancreatic cancer recurrence. Historically, it has been treated with palliative surgical bypass [1–5]. A retrograde endoscopic approach with placement of an enteral metal stent across the afferent limb stricture is often not possible [2]. We report the first case series of endoscopic ultrasound (EUS)-guided gastrojejunostomy using a lumen-apposing, self-expanding, metal stent (LASEMS) for therapy of acute afferent loop syndrome.

Three patients who had previously undergone a pancreaticoduodenostomy for pancreatic cancer presented with acute abdominal pain and vomiting. Computed tomography revealed dilation of the afferent loop (Fig. 1). A 15 mm × 10 mm LASEMS (Axios; Boston Scientific Corp., Marlborough, Massachusetts, USA) was then deployed under fluoroscopic guidance across the tract, resulting in apposition between the dilated afferent limb and the stomach wall. A 15-mm balloon was then used to dilate the tract within the lumen of the LASEMS to create an endoscopic gastrojejunostomy for drainage of the obstructed afferent limb (Fig. 3).

All three patients had resolution of clinical symptoms (Fig. 4) and were discharged. This series demonstrates that EUS-guided gastroenterostomy involving LASEMS placement offers a safe, technically feasible, and clinically successful endoscopic method of management for acute afferent loop obstruction.

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Endoscopic ultrasound-guided gastroenterostomy and placement of a lumen-apposing, self-expanding, metal stent for decompression of afferent loop obstruction.
Fig. 3 Placement of a lumen-apposing, self-expanding, metal stent (LASEMS). a The LASEMS was dilated using a 15-mm controlled radial expansion balloon. b Fluoroscopic confirmation of dilation through the LASEMS. c Fluoroscopic image of the LASEMS after dilation. d The LASEMS in the fistula tract after balloon dilation.

Fig. 4 Computed tomography confirmed decompression of the afferent limb and placement of the lumen-apposing, self-expanding, metal stent.

References

Bibliography
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