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 due to cancer recurrence (Fig. 1). All three patients underwent successful EUS-guided gastroenterostomy involving LASEMS placement. 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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Video 1

Endoscopic ultrasound-guided gastroenterostomy and placement of a lumen-apposing, self-expanding, metal stent for decompression of afferent loop obstruction.

Fig. 1 Computed tomography scan revealed a dilated afferent loop (A) in direct apposition with the stomach (B).

Fig. 2 Endoscopic ultrasound-guided puncture. a Dilated afferent limb. b Puncture using a 19-gauge needle and injection of contrast. c Insertion of a guidewire, with fluoroscopic confirmation. d Creation of gastroenterostomy tract using a 4-mm dilation balloon.

Fig. 3 Creation of gastroenterostomy tract using a 4-mm dilation balloon.
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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