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 (LAEMS) 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 gastrojejunostomy using LAEMS. The dilated afferent limb was located endosonographically by an echoendoscope in the stomach. The obstructed afferent limb was then punctured using a 19-gauge EUS needle. Contrast was injected through the 19-gauge needle into the dilated afferent limb to confirm the position, and a 0.035-inch guidewire was introduced through the needle and coiled into the obstructed afferent limb. Needle-knife cautery was used to make an incision into the fistula tract, and then a 6-mm balloon was used to dilate the tract (Fig. 2, Video 1). A 15-mm × 10-mm LAEMS (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 LAEMS to create an endoscopic gastrojejunostomy for drainage of the obstructed afferent limb (Fig. 3, Video 1). All three patients had resolution of clinical symptoms (Fig. 4) and were discharged. This series demonstrates that EUS-guided gastroenterostomy involving LAEMS placement offers a safe, technically feasible, and clinically successful endoscopic method of management for acute afferent loop obstruction.

Endoscopy_UCTN_Code_TTT_1AO_2AC

Competing interests: None

Pushpak Taunk, Natalie Cosgrove, David E. Loren, Thomas Kowalski, Ali A. Siddiqui
Division of Gastroenterology and Hepatology, Department of Internal Medicine, Thomas Jefferson University Hospital, Philadelphia, Pennsylvania, USA

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.

Video 1
Endoscopic ultrasound-guided gastroenterostomy and placement of a lumen-apposing, self-expanding, metal stent for decompression of afferent loop obstruction.
References

Bibliography
DOI http://dx.doi.org/10.1055/s-0034-1392564
Endoscopy 2015; 47: E395–E396
© Georg Thieme Verlag KG Stuttgart · New York
ISSN 0013-726X

Corresponding author
Ali A. Siddiqui, MD
Division of Gastroenterology and Hepatology
Department of Internal Medicine
Thomas Jefferson University Hospital
132 S. Street Main Building
Suite 480
Philadelphia
PA 19107
USA
Fax: +1-215-9556678
ali.siddiqui@jefferson.edu

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.