



EUS-directed transgastric ERCP with EUS-guided rendezvous for difficult biliary cannulation in a patient with Roux-en-Y gastric bypass

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INTRODUCTION

Management of biliary disease in patients following Roux-en-Y gastric bypass can be accomplished using EUS-directed transgastric ERCP (EDGE).^{1,2} Additionally, in instances in which biliary cannulation is challenging, EUS-guided rendezvous is an option.¹ Here, we describe the unique case of a patient who underwent an EDGE procedure with EUS-guided rendezvous for management of choledocholithiasis (Video 1, available online at www.videogie.org).

CASE PRESENTATION

An 83-year-old woman with a history of laparoscopic Roux-en-Y gastric bypass presented with several days' worth of post-prandial abdominal pain. She was hemodynamically stable with elevated liver enzyme levels and a mild leukocytosis. A CT scan of the abdomen/pelvis revealed a dilated common bile duct to 1.2 cm with distal choledocholithiasis (Fig. 1).

A jejuno-gastric fistula was created by deploying a 20- × 10-mm lumen-apposing metal stent (LAMS; Boston Scientific, Marlborough Mass, USA) under endosonographic guidance from the jejunum to the excluded stomach. Although a 2-stage EDGE procedure was planned, we chose to fixate the LAMS with sutures in case the patient developed cholangitis and needed urgent intervention (Fig. 2A and B). The patient tolerated the procedure and was discharged.

Two weeks later, the patient returned for the second part of her EDGE procedure. Dilation of the LAMS was performed under fluoroscopic guidance using an 18- × 19- × 20-mm anastomotic balloon dilator (Fig. 2C). A duodenoscope was advanced through the LAMS to the excluded stomach without issue.

Abbreviations: EDGE, EUS-directed transgastric ERCP; LAMS, lumen-apposing metal stent.

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After reaching the major papilla, selective biliary cannulation was attempted. Despite numerous attempts, the main pancreatic duct was repeatedly cannulated; thus, a plastic stent was temporarily placed in the pancreatic duct to prevent further cannulation (Fig. 3). Additional maneuvers to achieve biliary cannulation included cannulating over the pancreatic stent and using a slim-tipped cannula. Given the difficulty maintaining position due to the patient's EDGE, a precut sphincterotomy was initially thought to be higher risk. Ultimately, the patient did undergo needle-knife therapy, which was unsuccessful. Despite these maneuvers, we could not achieve selective biliary cannulation, and the decision was made to perform an EUS-guided rendezvous.

The duodenoscope was exchanged for a therapeutic echoendoscope. The echoendoscope was advanced across the LAMS into the excluded duodenum. The extrahepatic bile duct was then punctured using a 19-gauge needle (Expect; Boston Scientific). An 0.025-inch guidewire (VisiGlide; Olympus Corporation, Tokyo, Japan) was passed through the needle and successfully passed into the duodenum (Fig. 4A). The

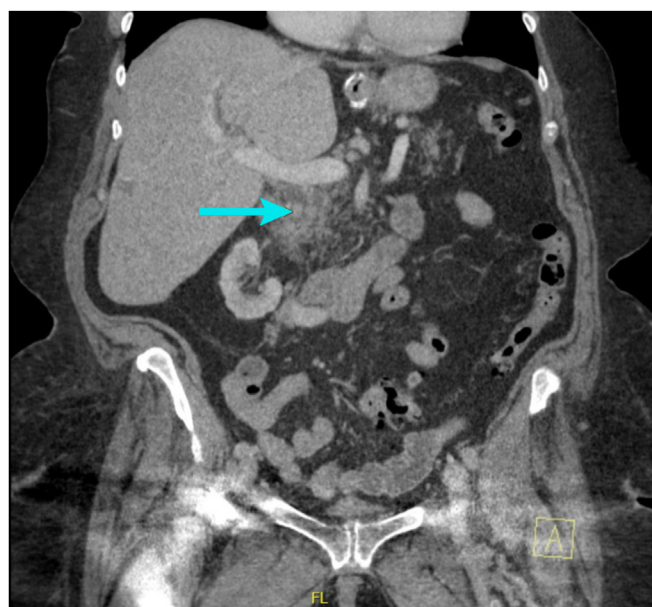


Figure 1. CT of abdomen and pelvis showing evidence of distal common bile duct obstruction (cyan arrow).

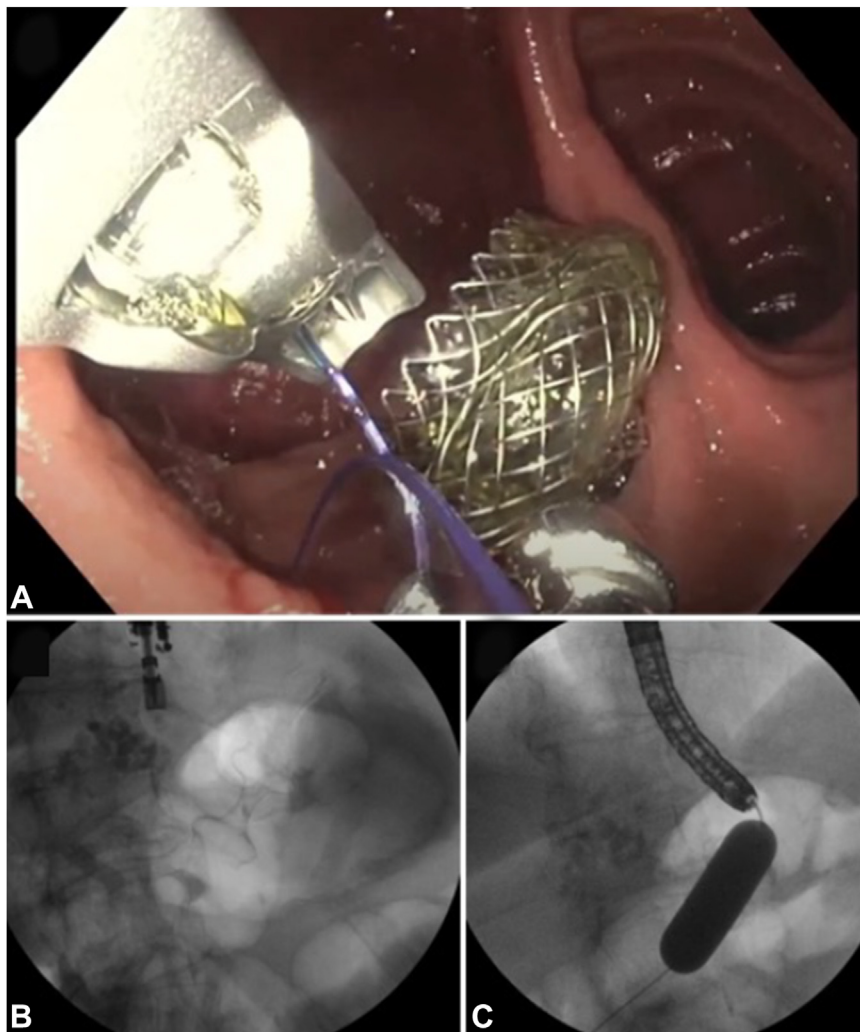


Figure 2. Endoscopic suturing of AXIOS stent (Boston Scientific) to create mature jejunogastric fistula (A), fluoroscopic confirmation of AXIOS deployment (B), and balloon dilation of AXIOS lumen to allow passage of duodenoscope (C).

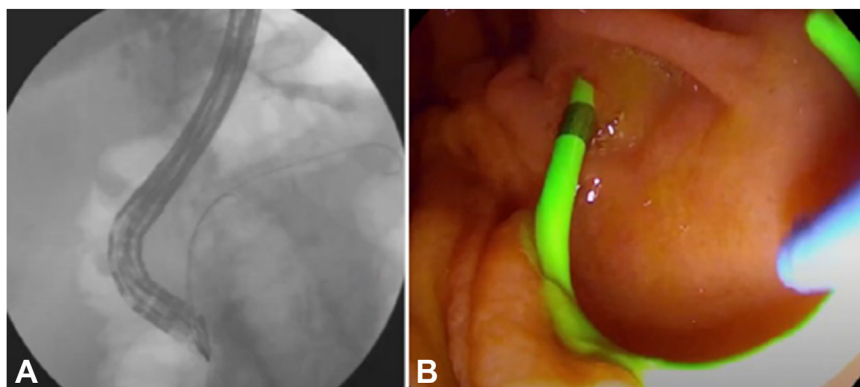


Figure 3. Part 2 of EUS-directed transgastric ERCP procedure, showing fluoroscopic view of incidental pancreatic duct cannulation (A) and subsequent placement of temporary plastic pancreatic stent (B).

echoendoscope was then removed, and a duodenoscope was used to grab the wire by the most distal/floppy end of the rendezvous wire; subsequently, the wire was pulled

through the working channel and retrieved by the endoscopist (Fig. 4B). The bile duct was then deeply cannulated. A cholangiogram revealed persistence of distal common bile duct

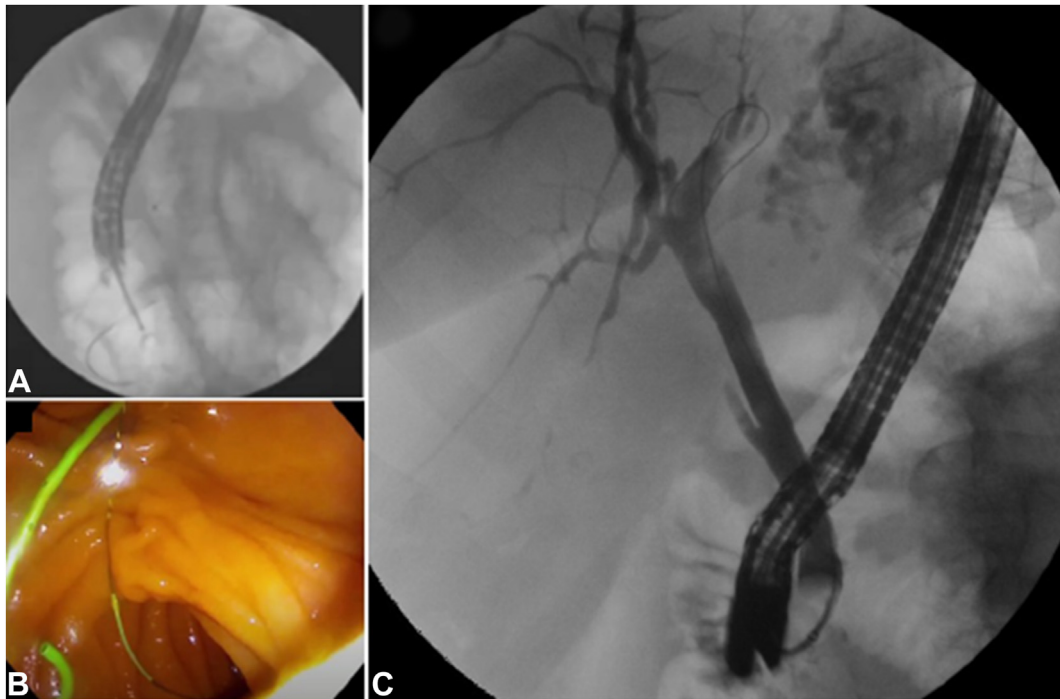


Figure 4. EUS-guided rendezvous procedure showing fluoroscopic placement of guidewire (A) and endoscopic visualization of guidewire (B). Cannulation is achieved, the duct is swept, and repeat cholangiogram shows patency of the biliary tree (C).

stones (multiple) and a single localized stenosis. Given the significant stone burden and degree of distal stenosis, a 10-mm × 6-cm transpapillary covered metal stent (Viabil; Con-med, Largo, Fla, USA) was placed.

Repeat ERCP for follow-up and stent removal occurred approximately 2 months later. The stent was removed, and the bile duct was cleared of all stones (Fig. 4C). The LAMS was removed, and the jejunogastric fistula was closed with endoscopic suturing.

CASE RESOLUTION

In over 6 months since this intervention, no further biliary procedures have been required. With this case, we demonstrate the endoscopic feasibility of combining multi-

ple therapeutic EUS techniques in a patient with surgically altered anatomy.

DISCLOSURE

The authors disclosed no financial relationships relevant to this publication.

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