

Novel endoscopic management of a pancreatico-biliary limb obstruction by the creation of an entero-enterostomy following Roux-en-Y gastric bypass

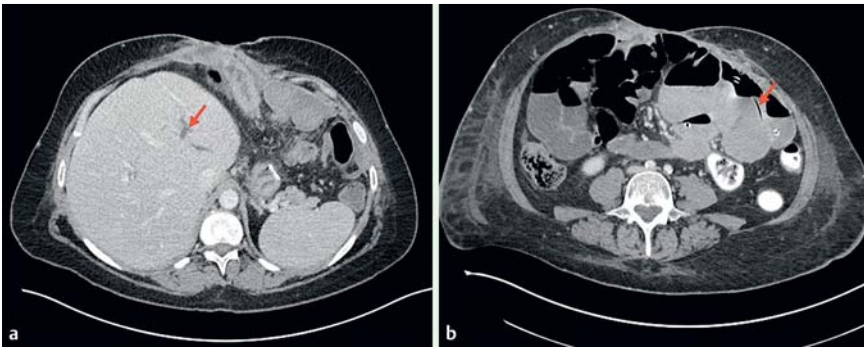


Fig. 1 Computed tomography of a bilio-pancreatic limb obstruction following Roux-en-Y gastric bypass. **a** Mildly dilated intrahepatic duct (arrow). **b** Distended bilio-pancreatic limb with feeding jejunostomy tube in situ (arrow).



Fig. 2 A 19-gauge Flex endoscopic needle (Boston Scientific, Marlborough, Massachusetts, USA) was used to puncture the opposing small-bowel walls; the intraluminal gastro-scope light is clearly visible (arrow).

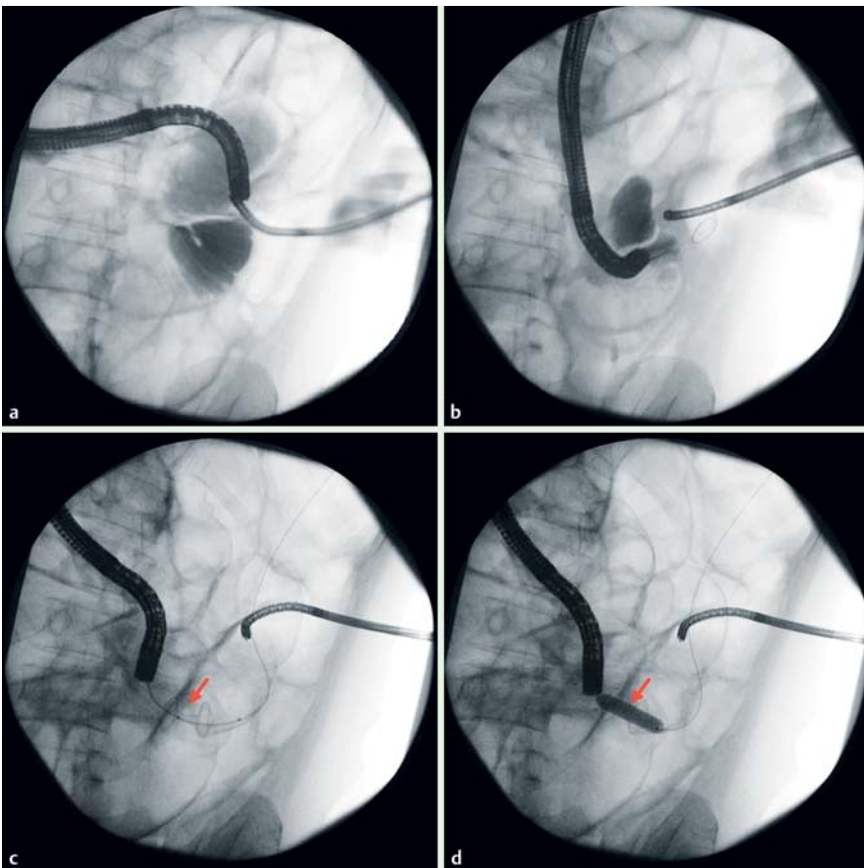


Fig. 3 Fluoroscopy showed the dual-channel gastro-scope and pediatric gastro-scope approach each other head-on. **a** Under direct visualization, the opposing small-bowel walls were punctured. **b** A guidewire was advanced into the bilio-pancreatic limb. **c** An Axios stent was deployed (arrow). **d** The stent was dilated using a CRE balloon dilator (Boston Scientific, Marlborough, Massachusetts, USA) (arrow).

Pancreatico-biliary or bilio-pancreatic limb obstruction is a rare but serious complication of Roux-en-Y gastric bypass (RYGB). This is characterized by an obstruction proximal to the jejuno-jejunostomy anastomosis resulting in back pressure of the pancreatico-biliary limb and remnant stomach with a potential for necrosis and perforation of the stomach, duodenum, and jejunum [1]. To our knowledge, the only reported treatment is surgical correction of the underlying cause.

Here we present a 40-year-old woman who underwent an RYGB for morbid obesity who in 2005 experienced complications in the form of gastric ulcer disease, surgical site infection, intra-abdominal collections, and enterocutaneous fistulae. She required multiple laparotomies and placement of a feeding jejunostomy tube. Several months later, she developed a pancreatico-biliary limb obstruction (Fig. 1), with back flow of bile through the jejunostomy site. Due to her complex surgical history, further surgery was considered unwise and the problem was approached endoscopically.

The procedure was performed under general anesthesia. Fluoroscopy was utilized throughout for adjunct imaging. Two operators, each with individual endoscopy towers, were required for the procedure.

Video 1



Endoscopic management of a bilio-pancreatic limb obstruction following Roux-en-Y gastric bypass.

The first operator used a dual-channel gastroscopie (GIF-2TH180; Olympus, Center Valley, Pennsylvania, USA) to access the Roux-limb transorally through the gastric pouch, and the second operator used a pediatric gastroscopie (GIF-XP160; Olympus), which was inserted through the jejunostomy site into the pancreatico-biliary limb.

The point along the limbs at which each operator could view the other operator's gastroscopie light was selected for the creation of a tract (▶ **Video 1**). A 19-gauge Flex endoscopic needle (Boston Scientific, Marlborough, Massachusetts, USA) was inserted through the dual-channel gastroscopie to access the excluded limb (▶ **Fig. 2**, ▶ **Fig. 3**). Following this, a long

0.025-inch Visiglide wire (Olympus) was then curled within the pancreatico-biliary limb and brought out through the jejunostomy. This enteroenterostomy was dilated with a dilation balloon to 4 mm, and a 10×10 mm Axios stent (Boston Scientific) was deployed and further dilated using a balloon to 10 mm (CRE Balloon Dilator; Boston Scientific). This procedure took approximately 90 minutes.

Following the procedure the patient's bowel obstruction resolved and she no longer experienced bilious outflow through the jejunostomy site.

This novel technique should be considered as a viable alternative to the traditional surgical approach in the obstruction of the pancreatico-biliary limb following RYGB.

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Competing interests: None

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Reference

- 1 Jones KB. Biliopancreatic limb obstruction in gastric bypass at or proximal to the jejunojejunostomy: a potentially deadly, catastrophic event. *Obes Surg* 1996; 6: 485–493

Bibliography

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