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

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-jejunos-tomy 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.
The first operator used a dual-channel gastroscope (GIF-2TH180; Olympus, Center Valley, Pennsylvania, USA) to access the Roux-limb transorally through the gastric pouch, and the second operator used a pediatric gastroscope (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 gastroscope 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 gastroscope 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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Chin Hong Lim1, Sayeed Ikramuddin1, Daniel B. Leslie1, Mustafa A. Arain2, Stuart K. Amateau2

1 Division of Minimally Invasive GI Surgery, University of Minnesota Medical Center, Minneapolis, United States
2 Division of Gastroenterology and Hepatology, University of Minnesota Medical Center, Minneapolis, United States

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Corresponding author
Stuart K. Amateau, MD
Interventional and Therapeutic Endoscopy
Division of Gastroenterology and Hepatology
University of Minnesota Medical Center
MMC 36 – 420 Delaware Street SE
Minneapolis
Minnesota 55455
United States
Fax: +1-612-625-5620
amateau@umn.edu