Title:
Endoscopic ultrasound combined with enteroscopy for bilioenterostomy stenosis after pancreatoduodenectomy. The first attempt of a two-person operation

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Dear Editor,
Bilioenterostomy stenosis is very challenging, and effective endoscopic treatment can prevent patients from undergoing surgery. We present a case of a patient with extremely narrow bilioenterostomy treated with simultaneous endoscopic ultrasonography and enteroscopy. It provides a new and feasible idea of endoscopic therapy for the treatment of such patients.

Case report
A 25-year-old young woman was admitted with a fever and jaundice. MRCP showed intrahepatic bile duct dilatation(Fig1). The patient had previously undergone pancreaticoduodenectomy for a pancreatic neuroendocrine tumor.

The patient underwent an enteroscope, but it failed to find the bilioenteric...
anastomosis. Subsequently, endoscopic ultrasound-guided rendezvous (EUS-RV) technology was used for auxiliary intubation. The enteroscope was placed in the intestinal cavity, and the endoscopic ultrasound was performed simultaneously by another endoscopist. The intrahepatic bile duct was punctured with a 19G puncture needle (Fig 2A), and the guide wire was inserted. Cholangiography showed that the bilioenteric anastomosis was narrow (Fig 2B). The hilar bile duct was superselected using a guidewire (Fig 2B). The guidewire was unable to enter the intestine through the narrow segment.

An endoscopist then performed the endoscopic ultrasound, and repeated attempts were made to apply the guide wire through the bilioenteric anastomosis. The guide wire attempts to pass through the bilioenteric anastomosis causing localized movement of the intestinal wall. Another endoscopist locates the bilioenteric anastomosis by looking for localized movement in the intestinal wall. The bilioenteric anastomosis was successfully found and cannulated successfully (Fig 3A, B). A double pigtail stent was placed between the stomach and liver (Fig 4). The 6mm dilating balloon was used to expand the bilioenteric anastomosis, and then two 7Fr double pigtail stents were inserted (Fig 5). The patient was discharged from the hospital one week after surgery without adverse events.

Discussion

Bilioenteric anastomosis strictures and was a rare complication after choledojejunostomy (1). Enteroscopy ERCP was an effective treatment (2-3). Finding and cannulating a bilioenteric anastomosis can be challenging due to the remodeling of the digestive tract (4). The EUS-RV technique was an advanced technology in biliary drainage and assisted biliary intubation (5). In our case, EUS-RV technology failed due to the narrow bilioenteric anastomosis. We considered that the patient had benign stenosis and would not benefit from EUS-guided hepaticogastrostomy (EUS-HGS) alone. Therefore, we adopted a new method - double endoscopy combined with simultaneous operations to complete the treatment. It allows patients to avoid more traumatic surgical procedures. More large, randomized clinical trials may be needed in the future to confirm the safety and efficacy of this
approach.

REFERENCES


Fig1:
A: MRCP showed intrahepatic bile duct dilatation
B: Endoscopic ultrasound guided puncture of intrahepatic bile duct through the stomach
C: Cholangiography was performed and the guide wire was superselected to the hilar bile duct
D: The Biliary-Enteric anastomotic was found and successfully intubated
E: The guide wire was successfully inserted into the intrahepatic bile duct under enteroscopy
F: A double pigtail stent was placed between the stomach and the intrahepatic bile duct
G: The Biliary-Enteric anastomotic was dilated by Dilating Balloon
H: Two double pigtail stents were placed at the bilioenteric anastomosis

Conflict of interest
The authors declare no conflict of interest.

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NO

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