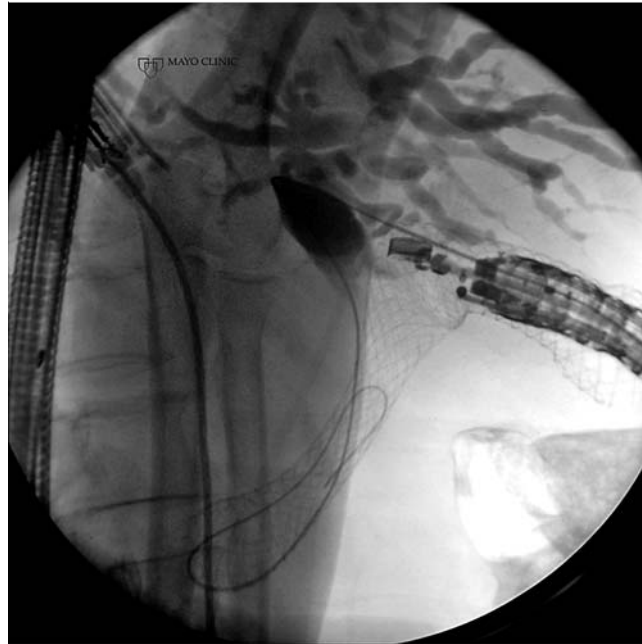


## Single-scope endoscopic ultrasound-guided rendezvous-assisted biliary stent insertion

Endoscopic retrograde cholangiography (ERC) is the most common method employed for drainage of malignant biliary obstructions. When ERC fails, bypass, either percutaneously or surgically, is available; more recently, endoscopic ultrasound-guided biliary drainage (EUS-BD) has been described [1–3]. Most endoscopists perform EUS-BD using a rendezvous approach in which the bile duct is accessed using an echoendoscope and a guide wire is inserted in an antegrade direction through the obstruction and into the duodenum. The echoendoscope is then withdrawn and the guide wire is left in place. A side-viewing or forward-viewing endoscope must then be passed so that the guide wire can be grasped and retrograde stent insertion performed. Alternatively, the echoendoscope may be used both to access the bile duct and to insert a biliary stent via an antegrade approach. However, the angle of access may prohibit antegrade stent insertion and necessitate a rendezvous procedure. We describe a variant of the rendezvous approach in which the entire procedure was performed using only the echoendoscope after efforts at antegrade stent insertion had initially failed.

A 76-year-old man presented with biliary obstruction due to unresectable pancreatic cancer. ERC was attempted on two separate occasions, but both times there was failure to access the papilla. A linear echoendoscope (UC140P-AL5; Olympus America, Center Valley, Pennsylvania, USA) was positioned in the duodenal bulb and a 19-gauge fine needle aspiration needle (EUSN-3; Cook Endoscopy, Winston-Salem, North Carolina, USA) was used to access the extrahepatic bile duct. A 0.035-inch guide wire was then passed through the needle and back down into the duodenum where it was coiled. Repeated efforts at antegrade stent insertion failed. In order to obviate the need for a conventional rendezvous procedure, a biopsy cable was advanced through the echoendoscope and the duodenal end of the guide wire was grasped and withdrawn back into the echoendoscope. Guide wire retraction provided a mechan-



**Fig. 1** With the echoendoscope positioned in the duodenal bulb, a fine needle aspiration needle was used to access the extrahepatic bile duct and a guide wire was passed into the duodenum.



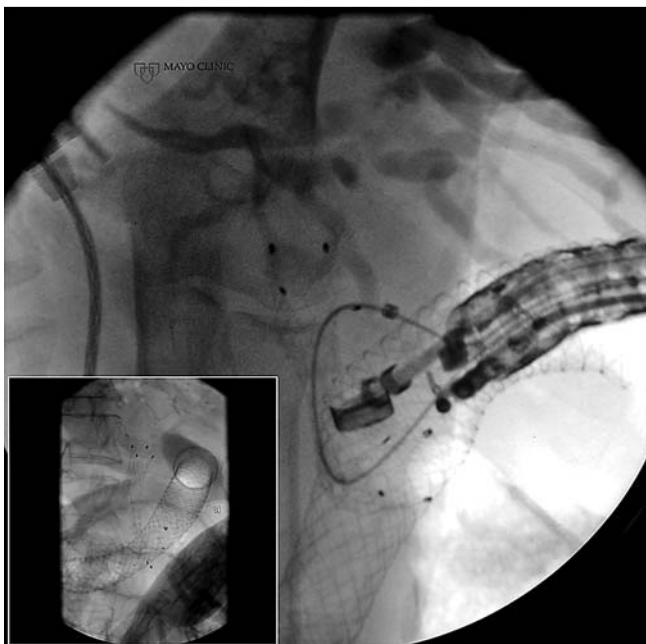
**Fig. 2** The duodenal end of the wire was grasped using the echoendoscope and withdrawn so that both ends of the guide wire were within the scope. Retraction of the duodenal end of the guide wire provided a mechanical advantage that allowed balloon dilation to be performed, even though this had previously failed during the initial attempts at antegrade stent insertion.

ical advantage, which allowed for a 4-mm pneumatic dilation (Titan Balloon; Cook Endoscopy) and successful antegrade stent placement (WallFlex 10×60 mm; Boston Scientific). We believe this single-instrument EUS technique may greatly facilitate rendezvous procedures as it

avoids the risk of guide wire loss and the additional time required to exchange scopes.

Endoscopy\_UCTN\_Code\_TTT\_1AS\_2AD

**Competing interests:** None



**Fig. 3** Continued retraction on the duodenal end of the guide wire allowed antegrade stent insertion to be performed without the requirement for a conventional rendezvous procedure, thereby avoiding the need for scope exchange and the risk of guide wire loss. **Inset** Final position of the extrahepatic bile duct and duodenal stents.

**L. L. Fujii, C. J. Gostout, M. J. Levy**

Division of Gastroenterology and Hepatology, Mayo Clinic, Rochester, Minnesota, USA

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### Corresponding author

**L. Fujii, MD**

Mayo Clinic  
 Division of Gastroenterology and Hepatology  
 200 First Street SW  
 Rochester, MN 55905  
 USA  
 Fax: +1-507-266-3939  
[fujii.larissa@mayo.edu](mailto:fujii.larissa@mayo.edu)