Combined percutaneous–endoscopic puncture rendezvous technique for biliary–enteric anastomotic occlusion after pancreaticoduodenectomy

Biliary–enteric anastomosis strictures after pancreaticoduodenectomy are infrequent, and their complete occlusion is rare [1]. Herein, we present a patient with left bile duct occlusion at the biliary–enteric anastomosis after pancreaticoduodenectomy who was successfully treated using a combined percutaneous–endoscopic puncture rendezvous technique.

A 57-year-old man was admitted for recurrent abdominal pain. He had undergone pancreaticoduodenectomy for an intraductal papillary mucinous neoplasm 2 years previously. Magnetic resonance imaging revealed a dilated and obstructed left hepatic duct (▶Fig. 1), for which a biliary stent was placed using a combined percutaneous–endoscopic puncture rendezvous technique, similar to that reported previously [2].

Ultrasound-guided percutaneous transhepatic biliary drainage was performed, followed by dilation of the drainage sinus up to 16Fr 1 week later (▶Fig. 2, ▶Fig. 3). Duodenoscopy showed a 2-mm anastomosis in the jejunal input loop, which did not communicate with the left hepatic duct. Choledochoscopy through the drainage sinus revealed that the opening of the left hepatic duct was closed due to scarring (▶Video 1). Balloon occlusion cholangiography showed only the right bile duct (▶Fig. 4).

The mucosal injection needle was inserted into the scar through the working channel of the choledochoscope toward the transillumination from the duodenoscope. While withdrawing the mucosal injection needle, a bow cutting knife was positioned to insert a guidewire into the bile duct path created by the needle. Subsequently, the needle knife was used to cut the scarred area at the anastomosis and establish a new tract (▶Video 1). Finally, a fully covered self-expandable metallic stent (60 × 10 mm) and a plastic biliary stent (8.5Fr × 70 mm) were deployed across the anastomosis and extended to the distal left hepatic duct using the guidewire (▶Fig. 5).

For patients unsuitable for reoperation, the combined percutaneous–endoscopic puncture rendezvous technique is safe and effective for the treatment of refractory benign biliary–enteric anastomotic stenosis.

Video 1 Treatment of a complete biliary anastomotic stricture that developed after pancreaticoduodenectomy using a combined percutaneous–endoscopic puncture rendezvous technique.

Endoscopy_UCTN_Code_TTT_1AR_2AG
Conflict of Interest

The authors declare that they have no conflict of interest.

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Endoscopy 2024; 56: E364–E365
DOI 10.1055/a-2299-1974
ISSN 0013-726X
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Funding Information

the National Clinical Key Subject of China 41792113

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