

Transpapillary EUS-guided retrograde puncture of the biliary tree as an alternative for failed rendezvous procedure

Endoscopic retrograde cholangiopancreatography (ERCP) is a first-line therapeutic method for obstructive biliary pathologies. Rarely, this procedure fails to obtain access and/or drainage of the biliary tree [1]. Until recently, such patients could be managed only via a percutaneous or surgical approach. An emerging alternative is endoscopic ultrasound (EUS)-assisted biliary access and drainage, namely rendezvous procedure. However, this technique is unsuccessful in 25% of patients [2].

We present a case of a 63-year-old man with diagnosis of pancreatic head tumor, stage IIA (according to American Joint Committee of Cancer, seventh edition), who was scheduled for surgery when he developed acute cholangitis. The patient had undergone antrectomy and gastrojejunostomy with Billroth II reconstruction 20 years previously due to a pyloric stenosis. On the blood tests, he had elevated inflammatory parameters (17 000 leucocytes/mm³, 93% neutrophils, C-reactive protein 9.5 mg/dL) and cholestasis (alkaline phosphatase 472 U/L, gamma-glutamyl transferase 1192 U/L, alanine aminotransferase 222 U/L, aspartate aminotransferase 105 U/L, total bilirubin 9.4 mg/dL, and direct bilirubin 7.9 mg/dL). The imaging tests revealed a dilated common bile duct (CBD), with a diameter of 13 mm.

An ERCP was attempted but cannulation was not achieved, although pre-cut was performed. Therefore, an EUS-guided transjejunal puncture of the CBD was performed using a 19-gauge needle (▶ Fig. 1). The cholangiography showed dilation of the CBD as described above, with a distal stenosis. A 0.035-inch guidewire was then passed through the needle into the CBD, but its constant proximal orientation prevented a rendezvous procedure (▶ Fig. 2). We then attempted an EUS retrograde approach, with direct puncture of the CBD, through the papilla and with fluoroscopic control (▶ Fig. 3). A plastic stent (10 Fr/5 cm) was placed, resulting in immediate output of bile and pus (▶ Figs. 4–8). The patient recovered well clinically and underwent cephalic duodenopancreatectomy 1 week later.



Fig. 1 Transjejunal endoscopic ultrasound-guided puncture of the distal common bile duct with a 19-gauge needle.



Fig. 2 Constant proximal guidewire orientation prevented the rendezvous procedure.



Fig. 3 The endoscopic ultrasound retrograde approach, with direct puncture of the common bile duct, through the papilla and with fluoroscopic control.



Fig. 4 Guidewire introduced through the echoendoscope into the common bile duct.



Fig. 5 Endoscopic view of plastic stent placement.



Fig. 6 Fluoroscopic view of plastic stent placement.



Fig. 7 Plastic stent in common bile duct.

Advances made in EUS have enabled the implementation of various methods of alternative access to the biliary tree [3–5]. In this case, we demonstrated that an EUS-guided retrograde approach to the biliary tree, through the papilla and with fluoroscopic control, is a feasible technique for decompressing the biliary tree when rendezvous fails.

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Fig. 8 Efficient drainage of the biliary tree.

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