Endoscopic ultrasound-guided jejunogastrostomy to perform endoscopic cholangiography in a patient with a modified Roux-en-Y hepaticojejunostomy

Fig. 1 Schema of modified Roux-en-Y hepaticojejunostomy.

Fig. 2 Endoscopic ultrasound (EUS) view of the jejunal loop beside the stomach, in a patient who had previously undergone a modified Roux-en-Y hepaticojejunostomy.

Fig. 3 Iodine contrast inside the jejunal loop, after endoscopic ultrasound (EUS)-guided transgastric needle injection and creation of a jejunogastrostomy.

A 43-year-old woman had been diagnosed with intrahepatic duct stones and referred in 2007 for cholecystectomy and modified Roux-en-Y hepaticojejunostomy. A jejunal loop had been fixed to the anterior wall of the stomach for future endoscopic access, if necessary (● **Fig. 1**). The patient had remained asymptomatic for 5 years, but then presented with multiple episodes of cholangitis. Magnetic resonance cholangiography in 2012, showed intrahepatic duct stones. Conventional endoscopic retrograde cholangiopancreatography (ERCP) failed. Thus a decision was taken to perform endoscopic extraction of the biliary stones by accessing the jejunal loop, guided by endoscopic ultrasound (EUS).

The procedure was performed using a linear echoendoscope (Pentax Corporation, Japan). The jejunal loop adjacent to the anterior stomach wall was identified (● **Fig. 2**). A 19-G needle (EchoTipUltra; Wilson-Cook, Winston-Salem, North Carolina, USA) was inserted transgastrically into the loop under EUS guidance. Iodine contrast was injected confirming adequate positioning of the needle inside the loop (● **Fig. 3**). A 0.035-inch guidewire (Jagwire; Boston Scientific, Massachusetts, USA) was advanced through the needle into the loop. A jejunogastrostomy was then created using a 10-Fr cystotome (Cystotome; Wilson-Cook, North Carolina, USA), and the tract was enlarged using a 10 mm × 4 cm biliary balloon dilation catheter (Hurricane RX; Boston Scientific, Boston, USA). A 9.8-mm gastroscope was then introduced through the jejunogastrostomy and into the jejunal loop. It was possible to reach the hepaticojejunostomy (● **Fig. 4**) and to perform direct cholangioscopy and endoscopic cholangiography. Using a 8.5/12/15-mm extraction balloon (Fusion; Wilson-Cook) it was possible to remove sludge and small stones from the bile ducts (● **Fig. 5**). In order to maintain patency of the jejunogastrostomy for further endoscopic access into the biliary ducts, we opted to place three 10-Fr double-pigtail plastic stents (Biliary Stent Set; Wilson-Cook) (● **Fig. 6**). The patient recovered well, and at 1-year follow-up she has remained asymptomatic without further episodes of cholangitis. Currently the plastic stents are still in place, and a further magnetic resonance cholangiography will be done.

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Fig. 4 Endoscopic view of the hepatico-jejunostomy.

Fig. 5 Iodine contrast and extraction balloon inside intrahepatic ducts. Sludge and small stones were removed.

Fig. 6 Endoscopic view of the fistula between the stomach and the loop jejunogastrostomy, with three double-pigtail plastic stents.

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Bibliography

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