Endoscopic ultrasound-guided duodenojejunal anastomosis to treat postsurgical Roux-en-Y hepaticojejunostomy stricture: a dream or a reality?

Roux-en-Y hepaticojejunostomy stricture develops in 8% to 40% of patients, and re-intervention is frequently required [1, 2]. Surgery remains the gold standard to treat this problem. We present the case of a 67-year-old man with recurrent cholangitis due to benign stricture of a biliary anastomosis. The patient had a history of sclerosing cholangitis and left hepatectomy with Roux-en-Y biliary enteric reconstruction.

In another hospital, the patient had been treated via a percutaneous trans-hepatic approach with an uncovered self-expandable metal stent (u-SEMS). Biliary lithiasis and several episodes of cholangitis recurred soon thereafter. Many attempts were made to remove the stones radiologically, but they all failed. Percutaneous internal–external drainage was then placed temporarily, and the patient was referred to our tertiary endoscopic center.

A peroral endoscopic procedure with a rendezvous technique was attempted by passing a guidewire through the internal–external drainage, but it did not succeed because the anastomotic loop was too long and tortuous. Therefore, a new endoscopic approach with an endoscopic ultrasound (EUS)-guided transenteric anastomosis was used. After the injection of contrast medium into the jejunal loop, an EUS-guided puncture was performed from the duodenal portion with a 19-gauge needle (ECHO-19, Cook Medical) (Fig. 1); a 0.035-guidewire was then placed into the jejunal loop, and a duodenojejunal fistula was created by pushing an 8.5-Fr cystoenterostome (XS 1341, Endoflex) on the guidewire. Finally, a 20-mm-long and 16-mm-diameter uSEMS (Nagi stent; Taewoong Medical) was left in place to allow consolidation of the endoscopic fistula (Fig. 2). After 3 days, an operative gastroscope (Pentax) was advanced through the stent to perform endoscopic retrograde cholangiopancreatography (ERC) and remove the previous uSEMS (Fig. 3). The patient was discharged after 2 days. No complications or procedure-related symptoms have been reported during 12 months of clinical follow-up.

EUS-guided duodenojejunal anastomosis is a feasible endoscopic approach in selected patients [3, 4]. Expert and skilled endoscopists are needed to perform the described procedure successfully.

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Massimiliano Mutignani\textsuperscript{1}, Raffaele Manta\textsuperscript{1}, Francesco Pugliese\textsuperscript{1}, Antonio Rampoldi\textsuperscript{2}, Lorenzo Dioscoridi\textsuperscript{1}, Edoardo Forti\textsuperscript{1}

\textsuperscript{1} Diagnostic and Interventional Digestive Endoscopy, Niguarda Ca’ Granda Hospital, Milan, Italy
\textsuperscript{2} Interventional Radiology Unit, Niguarda Ca’ Granda Hospital, Milan, Italy

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Corresponding author
Massimiliano Mutignani, MD
Endoscopy Unit
Niguarda Ca’ Granda Hospital
Piazza dell’Ospedale Maggiore 3
20162 Milan
Italy
Fax: +39-02-64442911
massimiliano.mutignani@ospedaleniguarda.it

Fig. 3 Passage of the scope through the created anastomosis.