Endoscopic ultrasound-guided transhepatic biliary drainage in altered anatomy: a two-step approach

Endoscopic ultrasound (EUS)-guided biliary drainage has been used for more than a decade as an alternative to percutaneous drainage. It offers a minimally invasive option for patients in whom conventional endoscopic retrograde cholangiopancreatography (ERCP) is unfeasible.

A 45-year-old woman with a history of cholecystectomy for cholecystitis, complicated by common bile duct transection with a subsequent Roux-en-Y hepaticojejunostomy was admitted with recurrent cholangitis. A previous attempt at balloon enteroscopy-assisted ERCP had failed and therefore EUS-guided biliary drainage was performed.

The echoendoscope was used to identify the left intrahepatic duct (LIHD) and a 19-gauge needle was used to access the duct. Cholangiogram showed a dilated LIHD with an anastomotic stricture (● Fig. 1 a, ● Video 1). A guidewire was advanced into the LIHD under fluoroscopic guidance. Multiple attempts to cross the stricture with the guidewire were unsuccessful. A plastic double-pig-tail hepaticogastrostomy stent was placed (● Fig. 1 b, ● Video 1) and the patient was discharged home.

On follow-up endoscopy 2 months later, the guidewire was advanced across the anastomotic stricture via manipulation of a swing-tip catheter. Dilatation of the stricture was performed and a transanastomotic hepaticogastrostomy stent was placed (● Fig. 1 c, ● Video 1). At 1-year follow-up, the patient had experienced no further episodes of cholangitis.

This case highlights a two-step antegrade approach to treat recurrent cholangitis and an anastomotic stricture in a patient with surgically altered anatomy [1]. EUS-guided biliary drainage constitutes the least invasive approach in patients with surgically altered anatomy [2,3].

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Fig. 1 Three steps for successful treatment of cholangitis and anastomotic stricture. **a** Cholangiogram showing anastomotic duct stricture (circle). **b** Deployment of the hepaticogastrostomy stent. **c** Follow-up jejunohepaticogastrostomy stent placement across the anastomotic stricture.

Video 1

Two steps for successful treatment of cholangitis and anastomotic stricture.

Aleksey Novikov, Nikhil A. Kumta, Benjamin Samstein, Michel Kahaleh

Division of Gastroenterology and Hepatology, Weill Cornell Medical College, Cornell University New York, New York, United States

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Corresponding author

Michel Kahaleh, MD, FASGE

Division of Gastroenterology and Hepatology
Weill Cornell Medical College
New York, NY 10021
USA
Fax: +1-646-962-0110
mkahaleh@gmail.com