

Endoscopic ultrasound-guided antegrade dilation of a stenosed hepaticojejunostomy

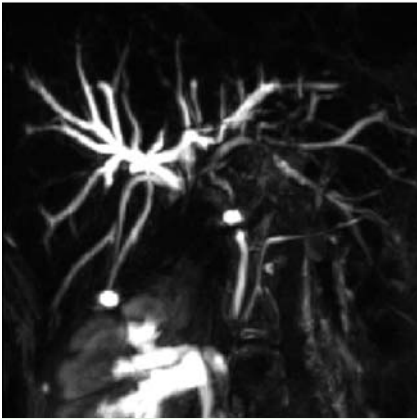


Fig. 1 Magnetic resonance cholangiopancreatography (MRCP) in a 43-year-old woman with cholangitis showing mild dilatation of the intrahepatic biliary radicles and stenosis of the hepaticojejunostomy that had been created for a previous bile duct injury.

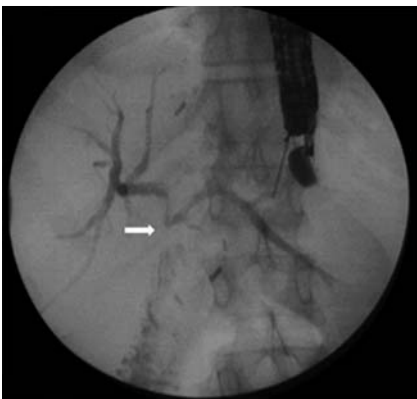


Fig. 3 Image taken during an endoscopic ultrasound (EUS)-guided cholangiogram showing stenosis of the hepaticojejunostomy (arrow).

Endoscopic dilation of a strictured hepaticojejunostomy can be performed through an access or afferent loop using a balloon enteroscope or a pediatric colonoscope; however, these can be cumbersome procedures. Alternatively, a percutaneous approach may be utilized, but is associated

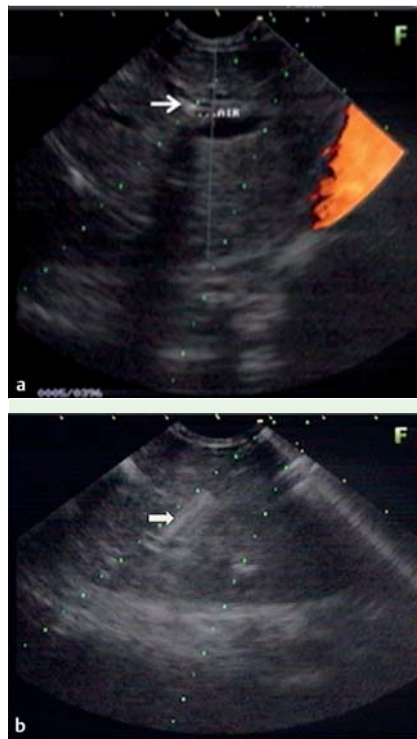


Fig. 2 Endoscopic ultrasound (EUS) views showing: **a** minimal dilatation of a peripheral bile duct (arrow); **b** the peripheral bile duct being punctured by an EUS needle (arrow).

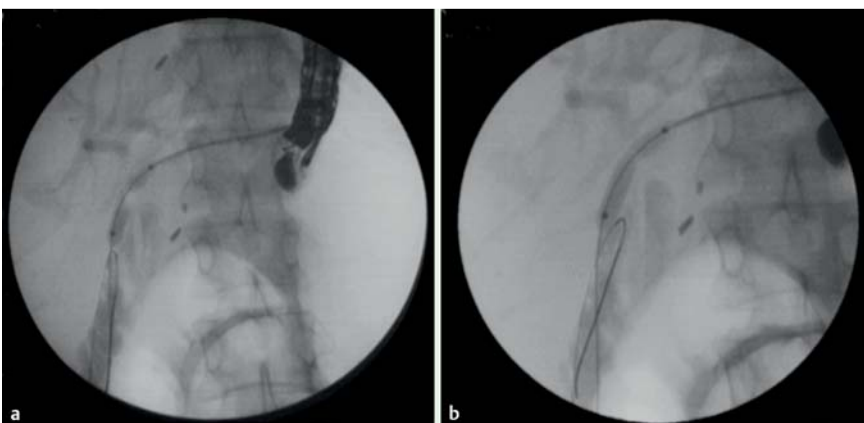


Fig. 4 Images taken during balloon dilation of the stenosis showing: **a** the waist at the start of the procedure; **b** disappearance of the waist after dilation for 3 minutes.

with significant morbidity because of the requirement for external drainage catheters. Recently, endoscopic ultrasound (EUS)-guided biliary drainage (EUS-BD) or therapy has been successfully used when retrograde access has failed [1–3]. Here we describe a case involving a stenosed hepaticojejunostomy that was treated by EUS-guided antegrade balloon dilation. To the best of our knowledge, this is only the second such case reported in the literature [4].

A 43-year-old woman presented with repeated episodes of cholangitis over an 18-month period secondary to stenosis of a hepaticojejunostomy that had been created for a previous bile duct injury (Fig. 1). The papilla was inaccessible endoscopically using a double balloon enteroscope because of a long afferent loop and adhesions. The patient was unwilling to undergo percutaneous transhepatic biliary drainage (PTBD).

EUS-guided left duct puncture was therefore performed via a transgastric approach using a therapeutic linear-array echo endoscope (EG530UT; Fujifilm Corporation, Tokyo, Japan). The peripheral intrahepatic left duct, with a diameter of 3.5 mm, was identified (Fig. 2a) and was punctured using a 19-gauge needle (Echo-tip Ultra; Cook Endoscopy, Winston-Salem, North Carolina, USA; Fig. 2b). EUS-guided cholangiography showed mild dilatation of the intrahepatic biliary radicles with a focal anastomotic stricture (Fig. 3). A 0.032-inch, 260-cm hydrophilic guide wire (Terumo Corporation, Tokyo, Japan) was passed through the needle and across the stricture. The tract was dilated over the wire using an ultra-tapered 6-Fr catheter (Cook Endoscopy). The guide wire was then exchanged for a stiffer 0.035-inch wire (Visiglide; Olympus Corporation, Tokyo, Japan).

Video 1

The technique for endoscopic ultrasound (EUS)-guided antegrade dilation of a stenosed hepaticojejunostomy, including the following steps: (i) puncture of the peripheral left hepatic duct using a 19-gauge EUS needle; (ii) taking of a cholangiogram through the needle to demonstrate the stenosis within the hepaticojejunostomy; (iii) negotiation of the guide wire through the stricture; (iv) exchanging of the wire through the catheter; (v) balloon dilation of the stenosis; and (vi) further injection of contrast to show free drainage through the dilated hepaticojejunostomy.

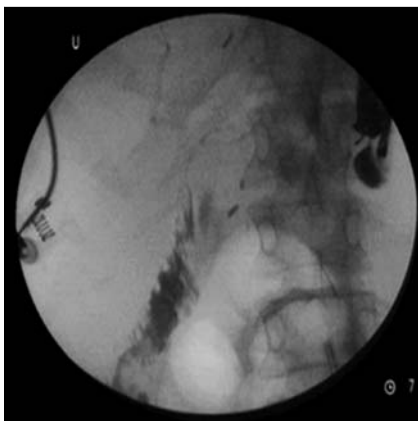


Fig. 5 After the procedure had been completed, a further injection of contrast showed free drainage through the hepaticojejunostomy.

EUS-guided antegrade stenting was deferred in view of the potential difficulty of removal or exchange of the stent at a later date. Instead the stricture was dilated over the wire using an 8-mm balloon dilator (Hurricane; Boston Scientific, Natick, Massachusetts, USA; **Fig. 4a**). Dilatation was performed for 3 minutes until the

waist disappeared (**Fig. 4b**). A repeat injection of contrast drained off easily through the anastomosis (**Fig. 5**; **Video 1**). No procedural complications were encountered. The patient remained symptom free at the end of 1 month following this single-stage procedure.

Endoscopy_UCTN_Code_TTT_1AS_2AD

Competing interests: None

A. Bapaye, N. Dubale

Department of Digestive Diseases & Endoscopy, Deenanath Mangeshkar Hospital and Research Center, Maharashtra, India

References

- 1 *Shah JN, Marson F, Weilert F.* Single-operator, single-session EUS-guided antegrade cholangiopancreatography in failed ERCP or inaccessible papilla. *Gastrointest Endosc* 2012; 75: 56–64
- 2 *Dhir V, Bhandari SP, Bapat M et al.* Comparison of EUS-guided rendezvous and precut papillotomy techniques for biliary access. *Gastrointest Endosc* 2012; 75: 354–359
- 3 *Bapaye A, Aher A.* Tu1537 Comparison of endoscopic ultrasonography guided biliary drainage (EUS-BD) and percutaneous transhepatic internal biliary stenting (PTBD-S) in patients with malignant biliary obstruction and failed ERCP due to an inaccessible papilla. *Gastrointest Endosc* 2012; 75: AB438
- 4 *Park DH, Jang JW, Lee SS et al.* EUS-guided transhepatic antegrade balloon dilation for benign bilioenteric anastomotic strictures in a patient with hepaticojejunostomy. *Gastrointest Endosc* 2012; 75: 692–695

Bibliography

DOI <http://dx.doi.org/10.1055/s-0032-1325894>
Endoscopy 2012; 44: E435–E436
 © Georg Thieme Verlag KG
 Stuttgart · New York
 ISSN 0013-726X

Corresponding author

A. Bapaye, MD

Dept. of Digestive Diseases and Endoscopy
 Deenanath Mangeshkar Hospital and Research Center
 Pune 411004
 Maharashtra
 India
 Fax: +91-20-40151969
 amolbapaye@gmail.com