

Use of a Soehendra stent retriever in dilation of an anastomotic biliary stricture in a post-liver transplant patient

Occasionally, bile duct strictures in patients who have undergone liver transplantation are impossible to traverse, dilate, and stent. Herein we present a novel technique for the dilation of a recalcitrant stricture using the Soehendra stent retriever device.

A 57-year-old woman with a history of orthotopic liver transplantation presented to the emergency department with pruritus and right-upper quadrant abdominal pain of 2 days' duration. Results of laboratory tests were relevant for platelets (93 000/mm³), alkaline phosphatase (181 U/L), and alanine transaminase (80 U/L).

Endoscopic ultrasound revealed that the common bile duct (CBD) was dilated to 11 mm, with a 5-mm stone in the distal duct. Another endoscopist attempted endoscopic retrograde cholangiopancreatography (ERCP) but cannulation was not achieved. Repeat ERCP displayed a fusiform distal CBD dilated to 20 mm, with a tight 4-mm-long concentric stricture at the anastomosis (Fig. 1 a, Video 1).

Although the guidewire was able to traverse the stricture, it was impossible to advance the tapered-tip biliary catheter (Conmed, Utica, New York, USA), the Titan balloon dilation catheter (Cook Medical, Winston-Salem, North Carolina, USA) or

the Soehendra 7-Fr dilator. The wire was left in place and a 7-Fr Soehendra stent retriever was advanced over the guidewire using forward-clockwise rotation (Fig. 1 b, Fig. 1 c). The stent retriever passed through the stricture and enabled the passage of an 8-mm Titan balloon,

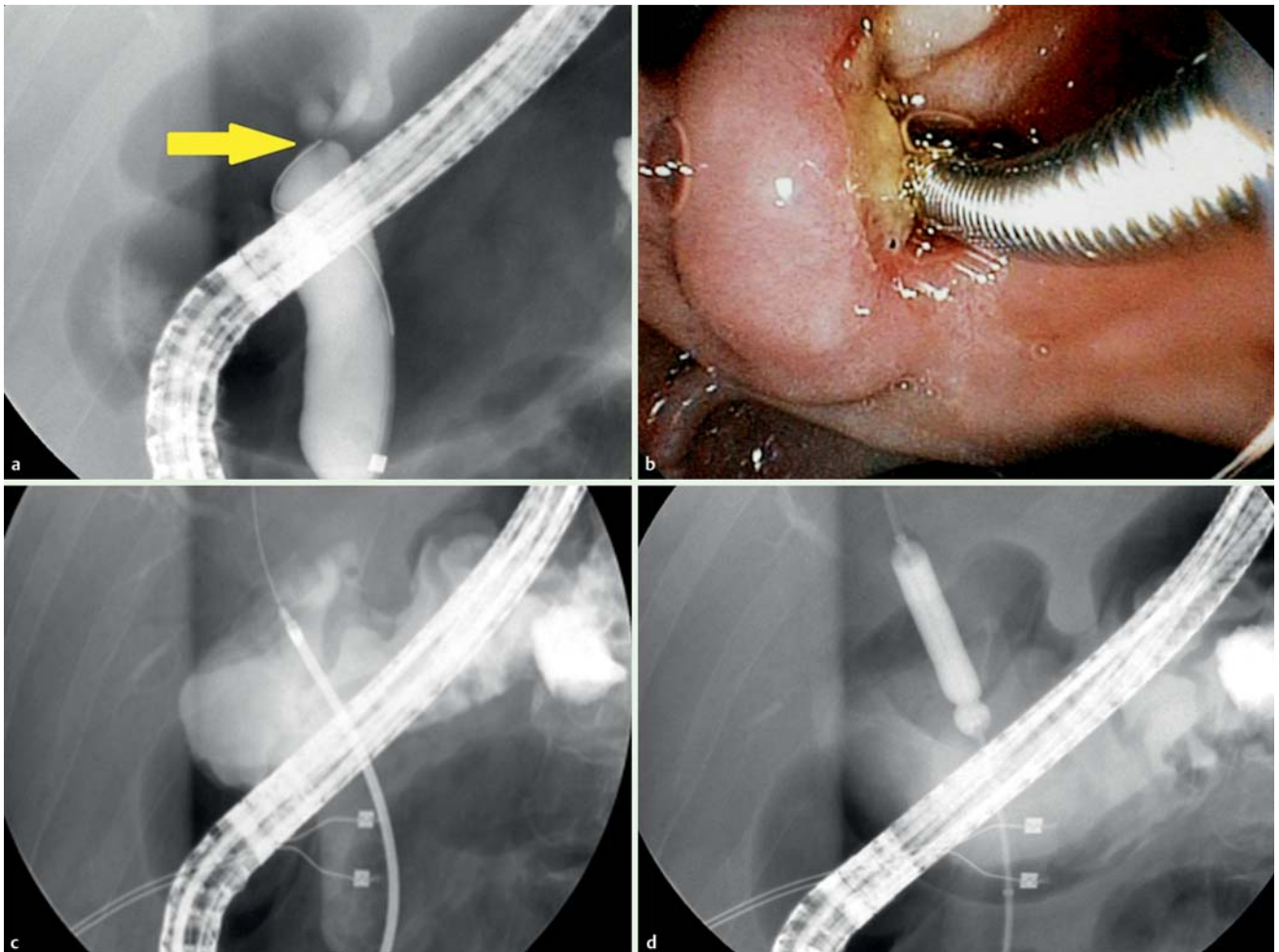
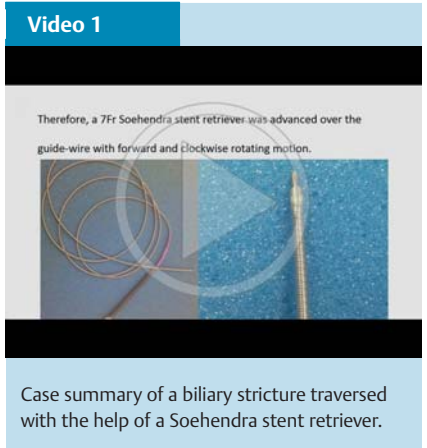


Fig. 1 Dilation of a biliary stricture using a Soehendra stent retriever. **a** The biliary stricture (arrow) could not be traversed. **b** The Soehendra stent retriever was directed by the guidewire and positioned at the level of the stricture using forward-clockwise rotation. **c** After 2 minutes, the stricture was traversed. **d** Disruption of the stricture enabled balloon dilation to be performed, as well as subsequent stent placement.

which was used to dilate the stricture. The segment was then stented with a 10-Fr plastic stent (● Fig. 1 d, ● Video 1).

Biliary strictures are the most frequent cause of delayed biliary complications after liver transplantation, representing 40% of total biliary complications [1]. Endoscopic modalities using balloon dilation and stenting have proven to be effective and safe diagnostic and therapeutic approaches [2]. However, in patients with anastomotic strictures, technical failure occurs in up to 16% and these cases must be treated with a combined endoscopic-percutaneous hepatic drainage or surgical reconstruction [3,4]. This case provides evidence that the use of the Soehendra stent retriever can be an effective method of traversing a difficult anastomotic biliary stricture, enabling the insertion of additional therapeutic devices, and allowing definite endoscopic therapy. The need for more invasive solutions, such as percutaneous transhepatic cholangial drainage or surgical reconstruction, was thus averted.

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