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/mm²), 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,
which was used to dilate the stricture. The
segment was then stented with a 10-Fr
plastic stent (Fig. 1, Video 1).
Biliary strictures are the most frequent
cause of delayed biliary complications
after liver transplantation, representing
40% of total biliary complications [1]. En-
doscopic modalities using balloon dilation
and stenting have proven to be effective
and safe diagnostic and therapeutic ap-
proaches [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 bili-
ary stricture, enabling the insertion of ad-
tional therapeutic devices, and allowing
definite endoscopic therapy. The need for
more invasive solutions, such as percuta-
neous transhepatic cholangial drainage or
surgical reconstruction, was thus averted.

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Competing interests: None

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