Successful dilation of a hard biliary stricture associated with primary sclerosing cholangitis using a novel drill dilator

Primary sclerosing cholangitis (PSC) is characterized by focal intrahepatic and extrahepatic bile duct stricture, and often causes jaundice due to dominant biliary strictures during its course [1]. The biliary stricture is usually dilated via mechanical dilation under endoscopic retrograde cholangiopancreatography (ERCP) guidance; however, PSC-related biliary strictures are sometimes too stenotic due to rich fibrosis to allow the passage of conventional dilation devices. Recently, a novel drill dilator (Tornus ES, Asahi Intecc, Aichi, Japan) has been developed and made commercially available which is designed to traverse difficult pancreaticobiliary strictures [2, 3, 4]. The spiral-threaded part of the dilator allows it to pass through the stricture on clockwise rotation (Fig. 1). The tip of the dilator is finely tapered to allow insertion of a guidewire with a diameter ≤ 0.025 inch. Here, we report successful use of the novel drill dilator for challenging severe biliary stricture when other conventional accessories would not work.

A 27-year-old male patient with a 6-year history of PSC was referred to our hospital with jaundice. Magnetic resonance cholangiopancreatography revealed a dominant biliary stricture at the hepatic hilum (Fig. 2). ERCP was performed to manage the hilar biliary stricture. A 0.025-inch guidewire was successfully passed through the stricture, although dilated intrahepatic bile ducts could not be imaged on the cholangiogram. Subsequently, mechanical dilation was attempted; however, neither the cannulation catheter, bougie dilator (ES dilator, Zeon Medical, Tokyo, Japan) (Fig. 3) [5], nor the Soehendra stent retriever (Cook Medical, Winston-Salem, North Carolina, United States) was able to advance past the stricture. Therefore, a novel drill dilator was used. The drill dilator passed smoothly through the hard biliary stricture without strong pressure on the stricture.
device by clockwise rotation (▶ Fig. 4, ▶ Video 1). The biliary stricture was further dilated using a 4-mm balloon dilator. The patient’s jaundice resolved in a few weeks after ERCP, without any adverse events.

Conflict of Interest

The authors declare that they have no conflict of interest.

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References


Bibliography
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