

DEN Video Article

Novel spiral dilator for endoscopic ultrasonography-guided drainage

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BRIEF EXPLANATION

A 68-YEAR-OLD WOMAN with distal biliary stricture due to unresectable pancreatic cancer underwent endoscopic ultrasonography (EUS)-guided hepaticogastrostomy (EUS-HGS) because endoscopic transpapillary biliary drainage was unsuccessful due to a gastric outlet obstruction. Puncture of the intrahepatic bile duct (B3) was performed via the stomach using a 19G needle (EZ Shot 3 Plus; Olympus Co., Tokyo, Japan) under EUS guidance. A 0.025-inch guidewire (Fielder25; Asahi Intecc Co., Aichi, Japan) was inserted into the bile duct after confirming the location of the bile duct by using cholangiography. Then the puncture tract was dilated using a novel 7F spiral dilator (Tornus ES;

Olympus Co.), the tip of which has a screw shape (Fig. 1, Video S1). When the assistant turned the handle of the spiral dilator clockwise, its tip advanced while dilating the puncture tract smoothly. The operator did not have to push the dilator while dilating, and therefore, the scope remained stable (Video S1). After dilation of the tract, the dilator was withdrawn by the assistant by turning the dilator counter-clockwise. In addition, the distal biliary stricture was dilated with this novel dilator. It could be advanced through the curve in the intrahepatic bile duct without resistance, meaning the stricture could be dilated easily. Finally, a metallic stent was placed at the stricture, and a plastic stent was placed at the puncture site (Fig. 2). No complications, such as bleeding or peritonitis, were observed after the procedure.

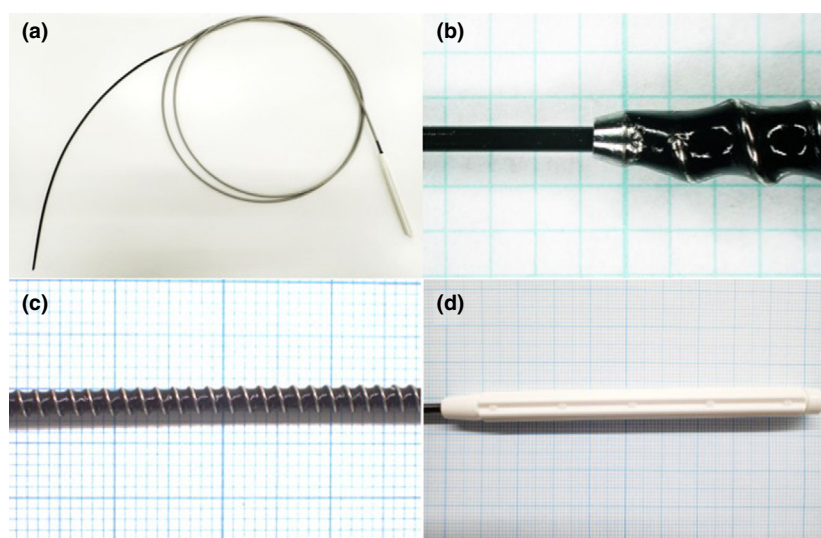


Figure 1 Novel spiral dilator, Tornus ES (7F; Olympus Co., Tokyo, Japan). (a) It has a coiled shaft that ensures flexibility. (b) The dilator has a tapered tip that matches the outer diameter of the guidewire. In addition, two other types can be selected for 0.025- and 0.018-inch guidewires, making it useful for various applications. (c) The dilator has a screw-shaped structure, and the outer diameter is 7F. (d) The handle is easy to rotate.

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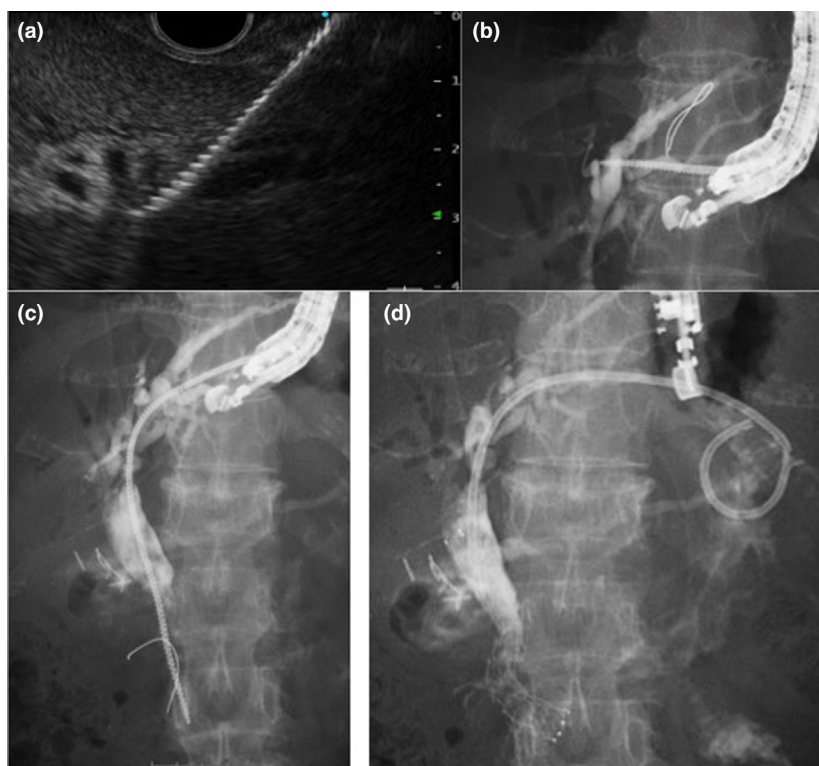


Figure 2 Endoscopic ultrasound-guided hepaticogastrostomy. (a) During dilation, there was no inexpedient increase in the distance between the liver and the gastric wall, which move apart from each other. (b) The scope remained stable because the operator did not have to push the dilator during dilation. (c) The distal biliary stricture could be dilated smoothly using a Tornus ES. (d) A metallic stent was placed at the biliary stricture, and a plastic stent was placed at the puncture site.

The dilation of the puncture tract is important, but it is sometimes a difficult step in EUS-guided drainage.^{1–5} The scope tends to become less stable when it is hard to dilate the target, causing the procedure to become unsuccessful. This novel spiral dilator has the potential to make the dilation step simple and easy due to its unique shape.

CONFLICT OF INTEREST

AUTHOR K.I. IS a consultant for Asahi Intecc Co. The other authors declare no conflict of interest for this article.

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SUPPORTING INFORMATION

ADDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

Video S1 Dilation of the puncture tract and distal biliary strictures using a Tornus ES.