A novel controllable catheter with a short flexible tip for guidewire insertion in severe malignant hilar biliary stricture

During stenting for a malignant hilar biliary obstruction (MHBO), guidewire insertion to the intended intrahepatic bile duct is sometimes very technically challenging [1]. It is especially difficult when the bend in the bile duct is steep and involved in the stricture. A novel controllable catheter (Zeon Medical, Tokyo, Japan) with a short flexible tip is more flexible and can be bent more than conventional controllable catheters (Swing Tip cannula; Olympus Medical Systems, Tokyo, Japan) [2], which have a range of 90 degrees upwards and downwards. Furthermore, the fulcrum for the tip bend is closer to the tip (15 mm) than in the conventional catheter (30 mm) (▶ Fig. 1).

An 81-year-old man developed obstructive jaundice with cholangitis due to liver and lymph node metastases. Endoscopic retrograde cholangiography revealed a severe Bismuth type IIIa stricture, and the bifurcation angle of the left hepatic duct (LHD) was extremely steep due to the displacement by metastatic lesions. The LHD was assumed to branch from near the upper end of the stricture. Although guidewire insertion into the LHD was attempted with various types of guidewires and a Swing Tip cannula, the procedure was unsuccessful. Therefore, we inserted the novel controllable catheter and bent its tip toward the LHD to adjust the axis. Subsequently, guidewire insertion into the LHD was achieved (Video 1). Thereafter, an additional guidewire was inserted into the right intrahepatic duct, and a bilateral metal stent placement using the stent-in-stent method was finally performed (Fig. 2).

Clinical success with sufficient and effective drainage was obtained without any adverse events.
Since this novel catheter has a movable fulcrum very close to the tip, it can be moved flexibly even in the narrow bile ducts involved in the stricture. This novel catheter could be a useful option as a salvage device in MHBO stenting where guidewire selection is difficult.

References


Bibliography

Endoscopy
DOI 10.1055/a-1978-8077
ISSN 0013-726X
published online 2022
© 2022. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/4.0/)

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

ENDOSCOPY E-VIDEOS
https://jref.thieme.de/e-videos

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos