

EUS-guided hepaticoduodenostomy combined with antegrade metal stenting using an ultrathin flexible delivery system ▶

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EUS-guided hepaticogastrostomy (HGS) combined with antegrade metal stenting (AS) can achieve longer stent patency and may be associated with fewer procedure-related adverse events (AEs) compared to EUS-HGS or EUS-AS alone [1–3]. However, EUS-guided hepaticoduodenostomy (HDS) with AS remains challenging [4]. Because the angle between the right hepatic bile duct and inserted device is typically extremely acute, antegrade insertion of hard and thick devices, such as a metal stent, is often extremely challenging. Here, we report a successful case of EUS-HDS with AS using a metal stent with 5.4-Fr ultra-thin flexible delivery system and a dedicated plastic stent.

An 84-year-old woman with a history of left lobectomy for liver metastasis of colonic cancer developed jaundice as a result of distal biliary obstruction owing to recurrence (▶ **Fig. 1**). Because endoscopic retrograde cholangiopancreatography (ERCP) had failed, owing to duodenal invasion, EUS-guided drainage was attempted. The right intrahepatic bile duct was punctured using a 19-gauge needle, and a 0.025-inch guidewire was inserted into the bile duct, followed by a tapered catheter. Subsequently, the guidewire traversed the stricture and advanced into the duodenum, and the fistula was dilated using a 4-mm balloon catheter (Kaneka Medix, Osaka, Japan). A novel metal stent with a 5.4-Fr delivery system (8×80 mm; Zeo Stent V; Zeon Medical, Tokyo, Japan), which is commercially available in Japan, was subsequently inserted and placed antegrade across the stricture. Finally, a 7-Fr dedicated single-pigtail plastic stent (Gadelius Medical, Tokyo, Japan), originally designed for EUS-HGS [5], was placed from the hepatic duct to the stomach (▶ **Fig. 2** and ▶ **Video 1**). The obstructive jaundice improved post-operatively, without any AEs.

The ultrathin flexible metal stent delivery system may facilitate AS through EUS-HDS. This procedure may be a useful option for treating malignant biliary obstruction in patients with failed ERCP who require an approach via the right intrahepatic bile duct.

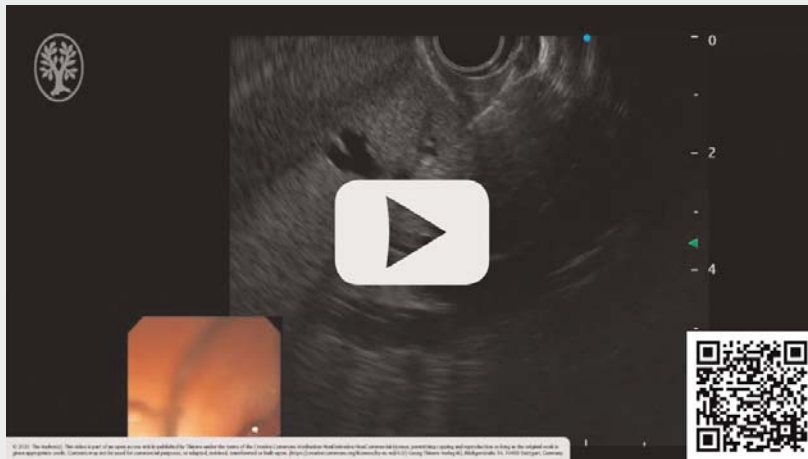


▶ **Fig. 1** Abdominal computed tomography revealed the right intrahepatic bile duct dilatation, without the left lobe.



▶ **Fig. 2** **a** The angle between the right hepatic bile duct and puncture route was extremely acute. **b** A 5.4-Fr ultrathin flexible delivery system was inserted into the bile duct. **c** The metal stent was placed antegrade across the bile duct stricture. **d** A dedicated single-pigtail stent was placed from the hepatic duct to the stomach.

VIDEO



▶ **Video 1** EUS-guided hepaticoduodenostomy with antegrade metal stenting using a metal stent with 5.4-Fr ultra-thin flexible delivery system and a dedicated plastic stent.

References

- [1] Mukai S, Itoi T. EUS-guided antegrade procedures. *Endosc Ultrasound* 2019; 8: S7–S13
- [2] Ogura T, Kitano M, Takenaka M et al. Multi-center prospective evaluation study of endoscopic ultrasound-guided hepaticogastrostomy combined with antegrade stenting (with video). *Dig Endosc* 2018; 30: 252–259
- [3] Yamamoto K, Itoi T, Tsuchiya T et al. EUS-guided antegrade metal stenting with hepaticoenterostomy using a dedicated plastic stent with a review of the literature (with video). *Endosc Ultrasound* 2018; 7: 404–412
- [4] Park SJ, Choi JH, Park DH et al. Expanding indication: EUS-guided hepaticoduodenostomy for isolated right intrahepatic duct obstruction (with video). *Gastrointest Endosc* 2013; 78: 374–380
- [5] Umeda J, Itoi T, Tsuchiya T et al. A newly designed plastic stent for EUS-guided hepaticogastrostomy: a prospective preliminary feasibility study (with videos). *Gastrointest Endosc* 2015; 82: 390–396

Competing interests

The authors declare that they have no conflict of interest.

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Bibliography

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