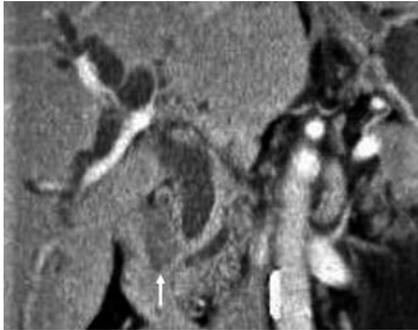


## Endoscopic ultrasound-guided one-step antegrade metal stent placement with an ultra-slim introducer for preoperative biliary drainage

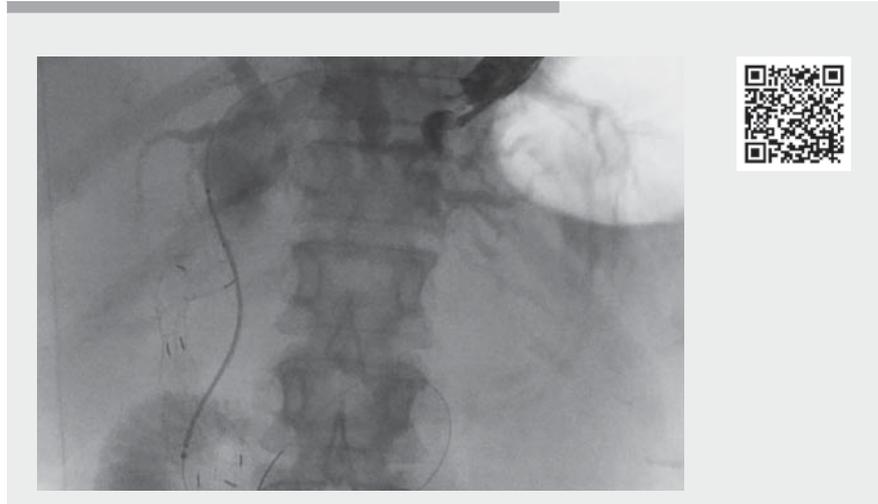


► **Fig. 1** A coronal image of contrast-enhanced computed tomography showed a dilated common bile duct due to pancreatic head cancer (arrow).



► **Fig. 2** A novel uncovered self-expandable metal stent with an ultra-slim 5.4-Fr introducer and an ultra-tapered stiff tip.

A 55-year-old-female suffered from advanced obstructive jaundice due to resectable pancreatic cancer (► **Fig. 1**). Preoperative biliary drainage via endoscopic retrograde cholangiopancreatography (ERCP) was attempted but unsuccessful due to duodenal obstruction. We then attempted endoscopic ultrasound-guided antegrade stenting using a novel uncovered self-expandable metal stent (SEMS) with an ultra-slim 5.4-Fr introducer and an ultra-tapered stiff tip (YABUSAME; Kaneka Medix, Osaka, Japan) (► **Fig. 2**) after placement of a duodenal stent (► **Video 1**). B2 was punctured with a 19-gauge needle via the stomach followed by contrast injection to depict the biliary tree (► **Fig. 3 a**). Then, a 0.025-inch angle-tip guidewire (INAZUMA;



► **Video 1** Endoscopic ultrasound-guided one-step antegrade metal stent placement with an ultra-slim introducer.

Kaneka Medix) was successfully manipulated antegrade into the duodenum through the stricture. Just after a removal of the needle, an introducer of a YABUSAME (10×60 mm) was inserted into the bile duct without any tract dilation and easily passed through the stricture (► **Fig. 3 b**). Finally, the stent was deployed (► **Fig. 3 c**). No adverse events had occurred for two weeks until surgery. EUS-guided biliary drainage includes bilioenterostomy, the rendezvous technique, and antegrade stenting. In preoperative biliary drainage, endoscopic ultrasound-guided bilioenterostomy seems unfavorable because the influence of a bilioenteric fistula on surgery is unknown [1]. Although the EUS-guided rendezvous technique and antegrade stenting do not form a fistula, both have pros and cons. In the rendezvous technique, tract dilation is usually unnecessary, but complicated steps including scope exchange, grabbing and pulling the guidewire, and cannulation are required. EUS-guided antegrade stenting is a simpler method; however, tract dilation

with a dilator [2] or catheter [3] prior to insertion of a SEMS introducer is usually required and that increases a risk of the bile leak. In antegrade stenting, this novel introducer is likely to allow a SEMS to be placed just after needle removal and the bile leak and procedural time to be decreased. This method could be a useful alternative after failed ERCP in preoperative biliary drainage.

Endoscopy\_UCTN\_Code\_TTT\_1AS\_2AD

### Competing interests

The authors declare that they have no conflict of interest.

### The authors

**Saburo Matsubara**  **Keito Nakagawa, Kentaro Suda, Tetsuro Fujita, Takeshi Otsuka, Masashi Oka, Sumiko Nagoshi**  
Department of Gastroenterology and Hepatology, Saitama Medical Center, Saitama Medical University, Kawagoe, Saitama, Japan



► **Fig. 3** Fluoroscopic views of endoscopic ultrasound-guided one-step antegrade stenting. **a** Cholangiogram after the puncture of B2 via the stomach depicted the dilated intrahepatic bile ducts and proximal common bile duct. A duodenal stent was placed in the second part of the duodenum (arrow). **b** Just after the removal of the needle leaving a guidewire in the duodenum, an introducer of an uncovered self-expandable metal stent was inserted into the duodenum over the guidewire. **c** The stent (10×60 mm) was deployed across the stricture.

## Corresponding author

### Saburo Matsubara, MD

Department of Gastroenterology and Hepatology, Saitama Medical Center, Saitama Medical University, 1981, Kamoda, Kawagoe-shi, Saitama 350-8550, Japan  
 Fax: +81-49-226-5284  
 saburom@saitama-med.ac.jp

## References

- [1] Isayama H, Nakai Y, Itoi T et al. Clinical practice guidelines for safe performance of endoscopic ultrasound/ultrasonography-guided biliary drainage: 2018. *J Hepatobiliary Pancreat Sci* 2019; 26: 249–269. doi:10.1002/jhbp.631

- [2] Iwashita T, Nakai Y, Hara K et al. Endoscopic ultrasound-guided antegrade treatment of bile duct stone in patients with surgically altered anatomy: a multicenter retrospective cohort study. *J Hepatobiliary Pancreat Sci* 2016; 23: 227–233. doi:10.1002/jhbp.329
- [3] Kawakami H, Kubota Y. Endoscopic ultrasonography-guided antegrade stenting combined with hepaticogastrostomy/hepaticojejunostomy using ultraslim instruments. *Endoscopy* 2017; 49: E88–E89. doi:10.1055/s-0043-1012

## Bibliography

*Endoscopy* 2022; 54: E302–E303  
**DOI** 10.1055/a-1524-1018  
**ISSN** 0013-726X  
**published online** 2.7.2021  
 © 2021. Thieme. All rights reserved.  
 Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

## ENDOSCOPY E-VIDEOS

<https://eref.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>