Reintervention technique with insertion of an uncovered metal stent by a 5.4-Fr delivery system for an occluded endoscopic ultrasound-guided hepaticogastrostomy stent

► **Fig. 1** The novel uncovered self-expandable metal stent with a 5.4-Fr stent delivery system (laser cut type, YABUSAME; KANEKA Medical, Osaka, Japan).

Endoscopic ultrasound-guided hepaticogastrostomy (EUS-HGS) is indicated for patients with failed endoscopic retrograde cholangiopancreatography (ERCP) [1]. The clinical benefit of EUS-HGS using a long-length, partially covered, self-expandable metal stent (PCSEMS) to prevent stent migration has been reported [2, 3]. However, reintervention can be challenging in the event of stent obstruction because biliary access through a long-length PCSEMS is often difficult. Biliary access through the mesh of the EUS-HGS stent may be a useful reintervention technique [4, 5]. In this procedure, insertion of the device into the biliary tract is a limiting step because the lumen of the mesh is relatively narrow. A novel uncovered self-expandable metal stent (UCSEMS) has recently become available in Japan (YABUSAME; KANEKA Medical, Osaka, Japan) (► **Fig. 1**). As the diameter of the stent delivery system is only 5.4 Fr and the tip is extremely tapered, stent delivery is performed by insertion along a guidewire. Here we describe the technique of reintervention through the mesh of an occluded EUS-HGS stent using the novel UCSEMS (► **Video 1**).

A 78-year-old man had undergone EUS-HGS with a long-length PCSEMS for duodenal obstruction caused by pancreatic head cancer 6 months previously. Although chemotherapy was performed,

► **Video 1** The novel uncovered self-expandable metal stent delivery system was inserted into the biliary tract through the mesh of an endoscopic ultrasound-guided hepaticogastrostomy stent.

obstructive jaundice occurred due to stent obstruction, and reintervention was attempted. After inserting an ERCP catheter into the biliary tract through the mesh of the PCSEMS (► **Fig. 2 a**), a 0.025-inch guidewire was deployed. Cholangiography revealed stent occlusion (► **Fig. 2 b**). The stent delivery system was then successfully inserted through the PCSEMS (► **Fig. 2 c**), and the stent was successfully deployed across the stricture site using the novel UCSEMS (8 × 6 cm) with no adverse events (► **Fig. 2 d**).

In the case of occluded EUS-HGS stent, the technique of reintervention through its mesh using the novel UCSEMS appears to be useful and should be further evaluated in a greater number of patients.

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Competing interests

The authors declare that they have no conflict of interest.

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► **Fig. 2** Reintervention through the occluded stent. **a** An endoscopic retrograde cholangiopancreatography catheter was inserted into the biliary tract through the mesh of the endoscopic ultrasound-guided hepaticogastrostomy stent. **b** Obstruction of the stent was apparent (arrow). **c** The novel uncovered self-expandable metal stent delivery system was inserted across the stricture site into the biliary tract. **d** Stent deployment was successfully performed.

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