Successful re-intervention through stent mesh after novel antireflux covered metal biliary stent placement

A novel antireflux covered metal stent (Kawasumi Duckbill Biliary Stent; Kawasumi Laboratories, Inc., Tokyo, Japan) has recently become available for malignant biliary obstruction in Japan. This is a laser-cut covered self-expandable metal stent (SEMS) with a duckbill-shaped antireflux valve attached to the duodenal end (Fig.1). The valve is closed except when bile is flowing out; it can therefore prevent reflux of duodenal contents into the bile duct. However, this design makes re-intervention via the duodenal end of the stent challenging. Here, we describe a successful re-intervention through the stent mesh after this novel SEMS was in place.

A 94-year-old man was admitted to our hospital with obstructive jaundice. Two months prior, a fully covered SEMS with a duckbill-shaped antireflux valve (Kawasumi Duckbill Biliary Stent) was placed for distal biliary cancer. Re-intervention through the duodenal end of the stent was impossible due to the antireflux valve, so re-intervention through the stent mesh close to the papilla was attempted. Penetration of the stent cover membrane with a 0.025-inch guidewire (VisiGlide 2; Olympus Medical Systems, Tokyo, Japan) was successful, and a catheter was inserted into the bile duct (Fig.2). On cholangiography, neither tumor ingrowth nor food impaction was present, but stenosis of the hilar bile duct was revealed (Fig.3). The guidewire was placed into the left and right bile ducts with an uneven double-lumen cannula (UDLC; PIOLAX, Kanagawa, Japan). Because of the open cell structure of the laser-cut covered SEMS, a 7-Fr plastic stent was
placed into the left and right bile ducts without dilation of the stent mesh (▶ Video 1). The “through-the-mesh” technique, which has been reported as a useful re-intervention method following endoscopic ultrasound-guided hepaticogastrostomy [1], could also be a useful re-intervention option after placement of this novel SEMS.

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Competing interests

The authors declare that they have no conflict of interest.

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Reference


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Video 1 Re-intervention through the stent mesh of a novel antireflux covered metal biliary stent.