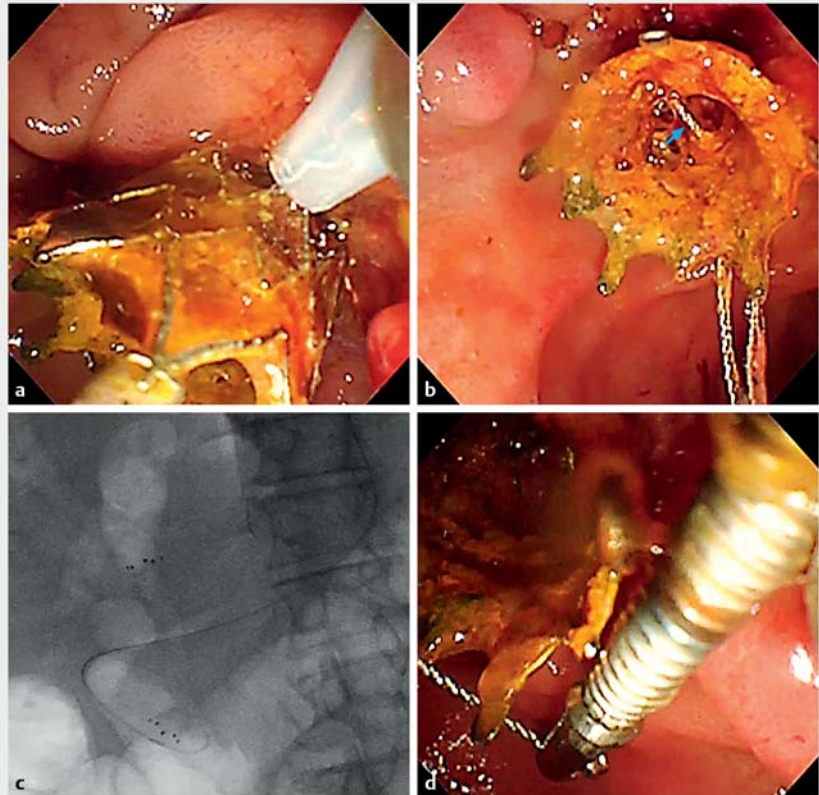


Use of argon plasma coagulation to successfully retrieve a snare forceps stuck in a laser-cut covered self-expandable metal biliary stent

A 77-year-old man who had undergone chemotherapy for distal biliary cancer was admitted to our hospital for obstructive jaundice due to stent occlusion. A laser-cut covered self-expandable metal stent (CSEMS; fully covered X-Suit NIR; Olympus Medical Systems, Tokyo, Japan) had been placed 12 months earlier for malignant biliary stenosis. We decided to replace the laser-cut CSEMS with a new CSEMS. The stent was held with a snare forceps (SD-5U-1; Olympus Medical Systems) and pulled towards the papilla, but it could not be removed from the bile duct (▶ Fig. 1 a). We tried to retrieve the snare forceps, but the snare became stuck in the stent (▶ Fig. 1 b). The endoscope was removed, leaving the snare forceps in place (▶ Fig. 1 c), and was reinserted along the forceps to cut the snare. The snare could not be cut using a Loop Cutter (FS-5Q-1; Olympus Medical Systems) (▶ Fig. 1 d). Argon plasma coagulation (APC; VIO300D with APC2, at 80 W with a flow rate of 2 L/min; ERBE Elektromedizin, Tübingen, Germany) was then used, and the snare was successfully cut (▶ Video 1). The snare forceps was retrieved and a new CSEMS was inserted within the laser-cut CSEMS.

There have been very few reports of endoscopic removal of laser-cut CSEMS for recurrent biliary obstruction [1]. The laser-cut CSEMS has an open cell structure, and once held by a snare forceps, the snare may become stuck in the cells of the stent. In such cases, if the stent cannot be removed from the bile duct, the snare forceps also cannot be retrieved. We describe the successful retrieval of a snare forceps stuck in a laser-cut CSEMS by cutting the snare using APC. Altogether, this case suggests that APC can be useful for cutting a snare stuck in a laser-cut CSEMS.

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▶ **Fig. 1** Attempted retrieval of the snare forceps. **a** The visible part of the stent was held with a snare forceps. **b** The snare became stuck in the cell of the stent. Part of the snare inside the stent is visible (blue arrow). **c** The endoscope was removed, leaving the snare forceps in place. **d** The snare was grasped by a Loop Cutter (Olympus Medical Systems, Tokyo, Japan), but could not be cut.

Competing interests

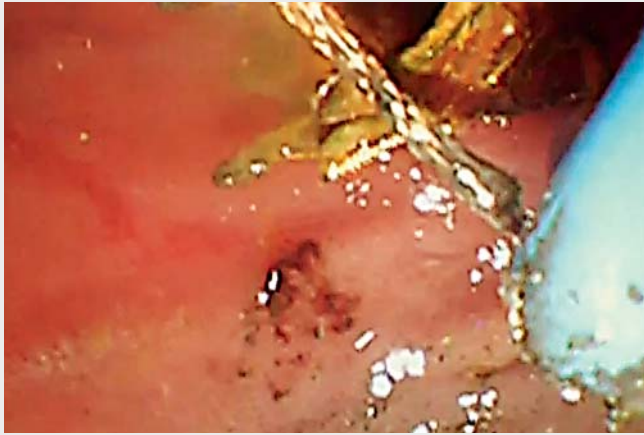
The authors declare that they have no conflict of interest.

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▶ Video 1 Use of argon plasma coagulation to retrieve a snare forceps that became stuck in a covered self-expandable metal stent.

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Reference

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