Removal of an ingrown biliary self-expanding metal stent

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BACKGROUND

Uncovered and partially covered self-expanding metal stents (SEMS) are primarily used in malignant biliary stenosis, fully covered are mostly reserved for benign pathology since they can be easily removed. In cases of mistaken diagnosis or inadvertent insertion of a PC-SEMS removal is much more difficult even impossible due to tissue in-growth or over-growth. Several possible removal techniques for ingrown SEMS such as »SEMS-in-SEMS« technique, the invagination method, and the use of a mechanical lithotripter have been described (1-5).

A CASE REPORT

67-year-old mail patient, with benign stenosis of distal common bile duct (CBD) due to chronic pancreatitis, was referred 6 months after a PC-SEMS was placed in an attempt to dilate the stenosis. Removal with a snare and »SEMS-in-SEMS« technique failed due to ingrowth of the proximal end of SEMS inside CBD. An attempt to remove the SEMS using a mechanical lithotripter and a long guide-wire passed through the mash at the distal end of SEMS in a loop-shaped manner was made (image 1). Procedure was done using 400 mm long 0.0035' guide-wire and rescue mechanical lithotripter. Regular biopsy forceps were used to grab the guide-wire and pull it through the working channel of the endoscope since foreign body retrieval forceps failed to secure the guide-wire sufficiently and it slipped through the serrated forceps surface. After removal of duodenoscope both ends of the guide-wire were inserted into the lithotripter sheath and wound on lithotripter axis. Under x-ray control SEMS was pulled into the lithotripter sheath and slowly peeled of CBD wall (image 2). There was minimal bleeding and no significant adverse events. Removed SEMS with some attached tissue were sent for histopathological analysis (image 3). Histology of the tissue sampled from SEMS showed only chronic inflammation and no neoplastic features.

CONCLUSION

Removal of an ingrown SEMS can be very a painstaking procedure. Using the described technique the procedure can be done using conventional ERCP armamentarium, quickly and safely.

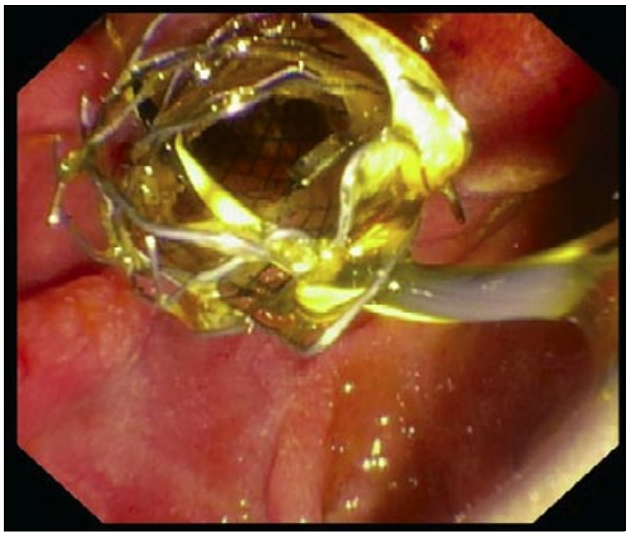

Image 1. Endoscopic view of guide-wire looped through distal end of SEMS.

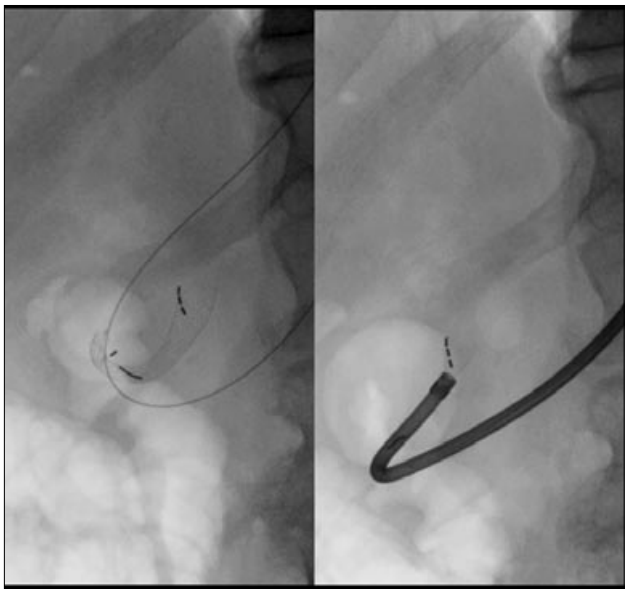

Image 2: X-ray of SEMS with looped guide-wire. SEMS pulled into the rescue lithotripter sheath.

Image 3: Removed SEMS with attached tissue.

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