# Endoscopic salvage technique for spontaneous dislocation and tumor ingrowth of a partially covered, self-expandable metallic stent after endoscopic ultrasound-guided choledochoduodenostomy

**Fig. 1** Radiograph 7 months after endoscopic ultrasound-guided choledochoduodenostomy in a 67-year-old woman, showing spontaneous dislocation of a partially covered self-expandable metallic stent.

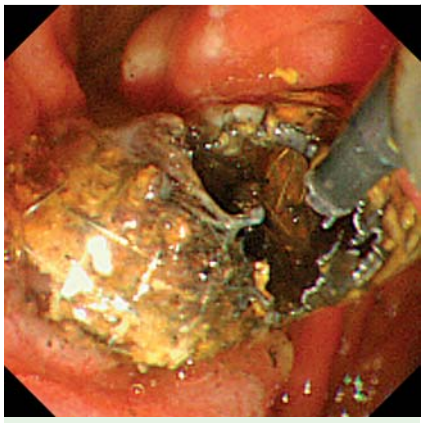

**Fig. 2** Endoscopic image 7 months after endoscopic ultrasound-guided choledochoduodenostomy showing the partially covered self-expandable metallic stent trimmed using argon plasma coagulation.

Endoscopic ultrasound-guided choledochoduodenostomy (EUS-CDS) has been established as an alternative method of biliary drainage after failure of endoscopic retrograde cholangiopancreatography (ERCP) [1,2]. Because of its prolonged stent patency and reduced bile leakage, use of the covered self-expandable metallic stent (CSEMS) has recently been favored. We present a case of spontaneous dislocation of a partially covered SEMS (PCSEMS) after EUS-CDS that was successfully rescued by endoscopic intervention.

**Fig. 3** Radiograph showing spontaneous dislocation of the partially covered self-expandable metallic stent and stricture of the stent due to tumor ingrowth.

A 67-year-old woman with metastatic cancer of the pancreatic head was admitted to our hospital with obstructive jaundice. She underwent EUS-CDS using a PCSEMS (WallFlex stent, 10×60 mm; Boston Scientific Japan, Tokyo, Japan) without complication (**Video 1**). Seven months later, she developed acute cholangitis. The PCSEMS had dislocated, as was confirmed on computed tomography (**Fig. 1**). Our first attempt was to try to extract the PCSEMS using a snare, but this failed because of tumor ingrowth into the uncovered portion. In our next attempt, the PCSEMS was partially trimmed using argon plasma coagulation with an electrosurgical generator (ICC 200; Erbe Elektromedizin, Tübingen, Germany) at 80 W and with a flow rate of 2 L/min (**Fig. 2**), and we attempted guidewire cannulation through the partially fragmented PCSEMS. A 0.025-inch guidewire was advanced through the ERCP catheter under fluoroscopic guidance (**Video 2**). ERC revealed a stricture of the PCSEMS caused by tumor ingrowth (**Fig. 3**, **Video 2**). An ERCP catheter and a biliary dilation catheter could not be passed through the stricture (**Video 2**). In our third attempt, we dilated the stricture using a 6-Fr wire-guided diathermic dilator (Cysto-Gastro-Set; Endo-Flex, Voerde, Germany) using an EGS-100 electrosurgical generator (Olympus, Tokyo, Japan; 30 W in pulse cut slow mode) (**Fig. 4**, **Video 2**). Finally, a 6-Fr uncovered SEMS (Zilver 635 stent; 10 mm×60 mm, Cook-Japan, Tokyo, Japan) was placed without complication (**Fig. 5**, **Video 2**).

**Video 1**

Endoscopic ultrasound-guided choledochoduodenostomy using a partially covered self-expandable metallic stent.

**Video 2**

Endoscopic salvage technique for a severe stricture of a partially covered self-expandable metallic stent that was dilated using a 6-Fr diathermic dilator, followed by placement of an uncovered self-expandable metallic stent.

**Fig. 4** Radiograph showing a 6-Fr diathermic dilator successfully advanced through the severe stricture over a guidewire under fluoroscopic guidance.

**Fig. 5** Radiograph showing placement of the uncovered self-expandable metallic stent in the stricture.

Spontaneous dislocation of a PCSEMS after EUS-CDS is a very rare complication [1,2]. In the case described here, we successfully mitigated this situation using endoscopic intervention. In particular, a diathermic dilator is useful for dilating severe strictures [3,4]. The findings described here suggest that more attention should be paid to the possibility of PCSEMS dislocation when performing EUS-CDS.

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**Competing interests:** None

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