Crisscross anchor-stents to prevent metal stent migration during endoscopic ultrasound-guided hepaticogastrostomy

Endoscopic ultrasound-guided hepaticogastrostomy (EUS-HGS) has become increasingly utilized to palliate malignant biliary obstruction in patients with inaccessible papillae as a result of duodenal tumor invasion [1,2]. Although a covered self-expandable metal stent (SEMS) is preferred to a plastic stent in EUS-HGS because of its lower risk of bile leakage [3]. SEMS migration can be a fatal complication [4]. Herein, we present a case in which a SEMS at risk of proximal migration was successfully managed by adding plastic stents to serve as an anchor.

An 82-year-old man, who had undergone transpapillary stenting using a covered SEMS for distal bile duct cancer, presented with duodenal obstruction. The biliary SEMS was removed endoscopically, followed by duodenal SEMS placement, and EUS-HGS was performed in segment 3 using a covered SEMS (modified-GIOBOR, width 10 mm, length 10 cm, 1 cm uncovered portion at the proximal end; Taewoong Medical Inc., Gimpo, Korea). The following day, percutaneous transhepatic biliary drainage was performed for cholangitis in segment 2. During this procedure, there was proximal dislocation of the SEMS as a result of interference between the percutaneous transhepatic biliary drainage catheter and the SEMS. A therapeutic duodenoscope (JF-260V, Olympus, Tokyo, Japan) was inserted immediately, and the distal SEMS end was barely observed (Fig. 1). The SEMS was moved 2 cm into the stomach by grasping its distal end using biopsy forceps. Subsequently, we punctured the covered mesh wall of the SEMS using an endoscopic retrograde cholangiopancreatography (ERCP) cannula and a 0.035-inch guidewire (Fig. 2), and placed a 5-Fr plastic stent (Geenen, Cook Endoscopy, Winston-Salem, North Carolina, USA). Another plastic stent was placed similarly in a crisscross manner (Fig. 3). The patient did not develop any further complications, including cholangitis or SEMS migration.

The management of SEMS migration in EUS-HGS is technically demanding and potentially requires surgical intervention [5]. Crisscrossing anchor stents can be used as a salvage technique to prevent this complication.

References

2 Hamada T, Isayama H, Nakai Y et al. Transmural biliary drainage can be an alternative to transpapillary drainage in patients with an indwelling duodenal stent. Dig Dis Sci 2014; DOI: 10.1007/s10620-014-3062-1

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