Spontaneous intraductal stent migration after endoscopic ultrasound-guided choledocho-gastrostomy

Endoscopic ultrasound-guided biliary drainage (EUS-BD) is increasingly being reported as an alternative method of biliary decompression [1]. EUS-guided choledochogastrostomy (EUS-CGS) is considered a possible salvage therapy for patients in whom EUS-guided choledochoduodenostomy (EUS-CDS) or hepaticogastrostomy (EUS-HGS) is not possible [2]. We report a case of intraductal migration of a partially-covered self-expandable metallic stent (PCSEMS) after EUS-CGS, which was managed successfully with endoscopic intervention.

A 56-year-old woman with locally advanced cancer of the pancreatic head was admitted to our hospital. She had previously undergone a gastrojejunostomy and percutaneous biliary drainage for malignant gastric outlet obstruction and biliary obstruction at another hospital. Given her strong desire to have the external drainage tube removed and because EUS-CDS and EUS-HGS were impossible for anatomical reasons, she underwent EUS-CGS with insertion of a PCSEMS for internal biliary drainage without complications (Fig. 1; Video 1).

The external drainage tube was removed successfully 15 days after EUS-CGS, but 1 month later she developed acute cholangitis. An emergency endoscopy revealed that the PCSEMS had migrated into the bile duct (Fig. 2), which was confirmed on an abdominal radiograph (Fig. 3). The remaining fistula was successfully cannulated and a guidewire was advanced through the migrated PCSEMS into the intrahepatic bile duct. Another PCSEMS was placed across the fistula between the first PCSEMS and the stomach (Fig. 4; Video 2). The cholangitis subsided and she was discharged 3 days after the procedure without complications.

Spontaneous intraductal migration of a covered metallic stent after EUS-BD is a serious complication [3]. We managed this successfully with endoscopic placement of a further PCSEMS across the resulting fistula. Because the extrahepatic bile duct and gastric antrum are not connected anatomically, we must be aware of this complication after EUS-CGS.

Competing interests: None

Fig. 1 Abdominal radiograph showing a partially covered self-expanding metal stent in position between the extrahepatic bile duct and the gastric antrum.

Fig. 2 Endoscopic view 1 month after formation of the choledochogastrostomy showing the partially covered self-expanding metal stent that had migrated into the bile duct.

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Video 1
Endoscopic ultrasound-guided choledochogastrostomy (EUS-CGS) using a partially-covered self-expandable metallic stent (PCSEMS).

Video 2
Placement of a second partially-covered self-expandable metallic stent (PCSEMS), which was positioned across the fistula between the first PCSEMS and the stomach.
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Fig. 3 Abdominal radiograph showing the distal end of the partially-covered self-expandable metallic stent located inside the fistula.

Fig. 4 Abdominal radiograph showing a second partially-covered self-expandable metallic stent (PCSEMS) placed across the fistula between the first PCSEMS and the stomach.