Self-expandable metal stent placement as a rescue procedure for lumen-apposing metal stent misdeployment in biliary drainage

We present the case of an 85-year-old man with jaundice due to cephalopancreatic cancer and a previous failed endoscopic retrograde cholangiopancreatography (ERCP) due to infiltration of the papilla (▶Fig. 1). Endoscopic ultrasound-guided biliary drainage (EUS-BD) with a transbulbar approach was scheduled. EUS showed distal stricture of the common bile duct (CBD) with retrodilation up to 13 mm in the proximal CBD tract. The biliary tract was accessed using a 19-gauge needle for subsequent over-the-guide wire stent placement due to the small CBD target (▶Fig. 2).

After CBD puncture and injection of contrast medium, a 0.035-inch guidewire was placed in the intrahepatic bile ducts (▶Fig. 3). A 6×8-mm electrocautery-enhanced lumen-apposing metal stent (LAMS; Hot Axios; Boston Scientific Corp., Marlborough, Massachusetts, USA) was introduced and the distal flange was released inside the bile duct under EUS guidance. The proximal flange was deployed using the intrachannel release technique [1]. However, as the endoscope was gently withdrawn, the proximal flange misdeployed into the abdominal cavity. We removed the delivery system leaving the guidewire inside the CBD, and inserted a 10×60-mm fully covered self-expandable metal stent (SEMS) through the iatrogenic fistula and across the misdeployed LAMS: the distal end of the SEMS was released into the proximal CBD and the proximal end was at the level of the bulb; outflow of bile and contrast medium was confirmed with no leakages (▶Fig. 4, ▶Video 1).

In the following days, no further adverse events were observed, and rapid reduction of bilirubin blood levels occurred. EUS-BD using LAMS is an effective and safe procedure when ERCP fails, and is currently a commonly performed technique [2–4]. However, technical failure of EUS-BD can occur, particularly when CBD diameters are narrow. We therefore recommend that these procedures should be performed by endoscopists with pancreaticobiliary skills because procedural complications may require techniques and accessories usually used during ERCP.

Competing interests

Prof. Alessandro Repici is a consultant for Boston Scientific, Fujifilm. Dr. Andrea Androni is a consultant for Boston Scientific, Olympus. The other authors declare that they have no conflict of interest.
The authors

Alessandro Fugazza1, Roberto Gabbiadini1, Matteo Colombo1, Silvia Carrara1, Roberta Maselli1, Alessandro Repici1,2, Andrea Anderloni1
1 Digestive Endoscopy Unit, Division of Gastroenterology, Humanitas Clinical and Research Center – IRCCS, Rozzano (Mi), Italy
2 Humanitas University, Department of Biomedical Sciences, Milan, Italy

Corresponding author
Alessandro Fugazza, MD
Digestive Endoscopy Unit, Division of Gastroenterology, Humanitas Research Hospital, Via Manzoni 56, Rozzano 20089, MI, Italy
alessandro.fugazza@humanitas.it

References

Fig. 3 Fluoroscopic image after contrast medium instillation showing complete stenosis of the distal common bile duct.

Fig. 4 Final fluoroscopic view of the biliary self-expandable metal stent positioned coaxially with the previously misdeployed lumen-apposing metal stent.