Endoscopic ultrasound-guided rescue of an uncovered self-expanding metallic stent causing biliary obstruction

UCTN

Removal of a malpositioned uncovered Wallstent (Boston Scientific, Natick, Massachusetts, USA) can be extremely difficult, time-consuming, and associated with the occurrence of complications [1]. Stent extraction using standard polypectomy snare or rat-tooth forceps is often unsuccessful [1]. Alternatively stent removal can be accomplished by piecemeal extraction of individual stent filaments [1–4]. We present a case in which drainage of the biliary system, obstructed by a Wallstent wedged to the hilum, was achieved by endoscopic ultrasound (EUS)-guided puncture of the left intrahepatic bile duct followed by rendezvous endoscopic retrograde cholangiography (ERC).

A 57-year-old man with metastatic cholangiocarcinoma, who had undergone a previous ERC with placement of an uncovered biliary Wallstent, was referred to us for evaluation of persistent jaundice (bilirubin 58 mg/dl). A repeat ERC showed complete occlusion of the Wallstent, with some contrast spilling into the right biliary system and complete obstruction of the left system (Figure 1a).

After multiple unsuccessful attempts at advancing a guide wire through the stent, the duodenoscope was exchanged for a linear-array echo endoscope (Olympus America, Melville, New York, USA), that was used to identify the dilated bile ducts within the left hepatic lobe and to puncture them using a 19-gauge needle. After bile had been aspirated and contrast injected to opacify the biliary system, a 0.035-inch Jagwire (Boston Scientific) was inserted through the needle and advanced antegradely across the mesh of the Wallstent, the hilar stricture, and into the duodenum (Figure 1b). A rendezvous ERC was finally performed, with placement of a 6 cm long, 6 mm wide Zilver stent (Wilson-Cook Medical, Winston-Salem, North Carolina, USA) through the meshes of the Wallstent (Figure 1c). Serum bilirubin levels were completely normalized 10 weeks after the procedure.

Figure 1 Fluoroscopic views of the procedure. **a** Endoscopic ultrasound (EUS)-guided transhepatic contrast injection with a 19-gauge needle (arrow), and the malpositioned uncovered Wallstent with its proximal end wedged into the hilum. **b** The guide wire was inserted from the left hepatic duct through the stent and into the duodenum. **c** The Zilver stent was placed through the mesh of the Wallstent.

We have reported here an illustrative case of EUS-guided rendezvous biliary drainage; this approach can be considered as a valid alternative to the percutaneous transhepatic route when a malpositioned SEMS, not amenable to endoscopic removal, is the cause of obstruction.

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