Overtube-assisted placement of a metal stent into the bile duct of a patient with surgically altered upper-gastrointestinal anatomy during double-balloon enteroscopy-assisted ERCP

We here report on a novel approach to deliver a fully covered self-expanding metal stent (SEMS) into the bile duct during double-balloon enteroscopy (DBE)-assisted endoscopic retrograde cholangiopancreatography (ERCP) using the overtube as an “accessory” or working channel.

An 87-year-old woman with a history of a Billroth II reconstruction many years previously and complex choledocholithiasis had previously undergone several ERCP attempts via both a colonoscope and a double-balloon enteroscope to clear the bile duct, which had been found to be dilated, tortuous, and distally stenotic (Fig. 1a).

A further DBE-ERCP (DBE-EN-450T5; Fujifilm, Saitama, Japan) was performed. During this procedure, a sphincteroplasty was performed using a 15-mm controlled radial expansion (CRE) balloon (Boston Scientific; Natick, Massachusetts, USA; Fig. 1b). An electrohydraulic lithotriptor was then successfully delivered through an ultraslim gastroscope (GIF-180; Olympus, USA), which had been advanced into the bile duct through an overtube (Fig. 1c). After electrohydraulic lithotripsy (EHL) had been successfully performed, large amounts of sludge and stones were removed. Nevertheless, complete clearance of the stones was still not possible.
The decision was therefore made to place a 10-mm diameter, 60-mm long, fully covered SEMS (Boston Scientific). The diameter of the stent delivery system was too large for the working channel of either an enteroscope or gastroscope. Therefore, the scope was removed, leaving the overtube in place and the biliary guidewire deep in the biliary system (Fig. 2a). A stent was then placed over the guidewire, with the overtube serving as a “large-diameter working channel” (Fig. 2b). The stent was advanced and released under constant fluoroscopic guidance (Fig. 2c, d).

After the guidewire and delivery system had been removed, the enteroscope was passed through the overtube, with the overtube serving as a “large-diameter working channel.” The ring of the overtube allowed the precise position of the distal end of the overtube to be seen on fluoroscopy and the flexibility of the DBE overtube allowed the stent delivery system to be passed smoothly into the required position. We believe this technique is useful, and should be added to the therapeutic arsenal of the biliary endoscopist.

References


Bibliography

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