Internal biliary stent placement following endoscopic ultrasound-guided nasobiliary drainage

Running head: Stent exchange technique after EUS-BD

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An 83-year-old man with obstructive jaundice was admitted to our department. He had undergone chemotherapy for malignant lymphoma. Seventeen months later, computed tomography revealed a distal bile duct mass. Endoscopic ultrasound (EUS)-guided fine-needle aspiration of the mass revealed malignant lymphoma. Endoscopic retrograde cholangiopancreatography (ERCP) was unsuccessful due to difficult cannulation, so EUS-guided choledochoduodenostomy (EUS-CDS) was performed. Although a 0.025-inch guidewire was advanced into the intrahepatic bile duct, a tapered ERCP/balloon/Soehendra biliary dilation catheter (SBDC-6, Cook-Japan, Tokyo, Japan) could not be passed across the tract. We attempted to dilate the tract using a guidewire-induced needle knife, but the knife was displaced from the axis of the bile duct between the duodenal bulb and bile duct. Then, a 5-Fr nasobiliary tube was put in place. Fourteen days after EUS-CDS, we tried to exchange the nasobiliary stent with a duodenoscope. First, the nasobiliary tube was cut using scissors (FS-3L-1, Olympus Medical Systems, Tokyo, Japan) and loop cutter forceps (FS-5L-1, Olympus). Next, the remnant tube was cannulated using a wire-guided technique via the ERCP catheter. The tube was trapped in the snare with the snare-over-the-wire technique [1] (Fig. 1). After removing the remnant tube via the working channel with the snare-over-the-wire technique, a 7-Fr plastic stent was put in place without complications (Fig. 2).
EUS-CDS is a new biliary drainage technique [2]. However, when the nasobiliary stent is first put in place, an internal stent is necessary for the second step via the first puncture tract. We describe a rare case of stent exchange after EUS-guided nasobiliary drainage that was performed using scissors, loop cutter forceps, and a snare-over-the-wire technique. This technique might be particularly useful after EUS-CDS is put in place with nasobiliary drainage.
REFERENCES


FIGURE LEGENDS

**Fig. 1:** Endoscopic image showing the snare-over-the-wire technique via the remnant nasobiliary tube following endoscopic ultrasound-guided nasobiliary drainage.

**Fig. 2:** A 7-Fr plastic stent was placed via the fistula without complications after endoscopic ultrasound-guided nasobiliary drainage.

**Video**

The nasobiliary tube was cut using scissors (FS-3L-1, Olympus Medical Systems, Tokyo, Japan) and loop cutter forceps (FS-5L-1, Olympus). The remnant tube was cannulated using a wire-guided technique via the ERCP catheter. The tube was trapped in the snare with the snare-over-the-wire technique. After removing the remnant tube via the working channel with the snare-over-the-wire technique, a 7-Fr plastic stent was put in place without complications.