Endoscopic retrieval of a migrated surgical clip in a choledochojejunal anastomosis using the rendezvous technique

It is a rare complication for a surgical clip to migrate into a bile duct [1, 2], and removing a migrated surgical clip endoscopically is technically challenging, particularly in patients with surgically altered anatomy. We report here the first successful endoscopic removal of a migrated surgical clip using the rendezvous technique of percutaneous transhepatic biliary drainage (PTBD) and double-balloon endoscope (DBE)-assisted endoscopic retrograde cholangiography (ERC) (▶ Video 1).

A 35-year-old woman with a history of congenital biliary dilatation who had undergone extrahaepatic bile duct resection and choledochojejunostomy 8 months previously was admitted for obstructive jaundice. Computed tomography and magnetic resonance cholangiopancreatography showed intrahepatic biliary dilatation and anastomotic obstruction of the choledochojejunal anastomosis (▶ Fig. 1a, b). We attempted ERC assisted by a short-type DBE (EI-580BT; Fujifilm, Tokyo, Japan). Insertion to the blind end and discovery of the choledochojejunal anastomosis were successful; however, endoscopic imaging showed obstruction with a migrated surgical clip in the choledochojejunal anastomosis (▶ Fig. 1c).

It was difficult to gain access into the bile duct beyond the clip, and at this point we gave up the attempt at endoscopic treatment. Four days later, we tried PTBD and succeeded in guiding the tip of a PTBD catheter beyond the clip to the jejunal side of the obstruction. As the patient firmly refused to undergo further surgery, however, we reattempted DBE-assisted ERC. The endoscopic catheter successfully accessed the bile duct using the PTBD catheter (▶ Fig. 2). After dilation using an 8-mm biliary dilation balloon (REN; Kaneka, Osaka, Japan) was successful, the migrated surgical clip was carefully removed with forceps, allowing placement of two endoscopic biliary drainage tubes consisting of 5-Fr plastic stents.
The DBE-assisted ERC-PTBD rendezvous technique has been reported to be effective [3–5]. A combined PTBD procedure which exerts force on the tip of the catheter may also be effective, especially if endoscopic treatment for postoperative mechanical obstruction is unsuccessful.

Competing interests

The authors declare that they have no conflict of interest.

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