Multiloop traction method during endoscopic hemostasis for post-sphincterotomy bleeding of the peridiverticular papilla

Periampullary diverticulum (PAD) is considered a risk factor for difficult biliary cannulation during endoscopic retrograde cholangiopancreatography (ERCP) because it makes the papilla unidentifiable [1]. Applying a traction force near the papilla has been reported to be effective in PAD biliary interventions [2]. We report a successful case of endoscopic hemostasis in post-sphincterotomy bleeding, using the multiloop traction method (M-loop method), in a patient with PAD [3] (Video 1).

A 79-year-old man, taking direct oral anticoagulants (DOACs) for atrial fibrillation, presented with symptomatic common bile duct stones. His DOAC medication was temporarily discontinued on the day of the procedure. A successful endoscopic sphincterotomy (ES), with complete stone removal, was achieved. Post-ES bleeding was noted 4 days after the procedure (Fig. 1). Achieving endoscopic hemostasis was challenging because the bleeding source was covered with duodenal mucosal folds. The M-loop method was used to locate and expose the bleeding source (Fig. 2). A SureClip (Micro-Tech, Nanjing, China), attached to a multiple-loop-thread, was deployed to cover the mucosal fold. Additional clips were hooked onto the free loop and attached to the oral side of the duodenal wall. A traction force was generated to pull the duodenal mucosa covering the papilla upward. The bleeding point was sufficiently exposed (Fig. 3, Fig. 4). A pancreatic stent was placed to avoid post-ERCP pancreatitis. Successful hemostasis was achieved with endoscopic coagulation, using a Coagrasper (Olympus, Tokyo, Japan) (Fig. 5). The threads used in the M-loop method were cut after hemostasis. Rebleeding was not observed after restarting DOAC therapy. PAD has been reported to be a risk factor for post-ES bleeding [4]. Hemostasis for post-ES bleeding may be challenging in patients with PAD due to the deviation of the papilla’s position. Traction, using the M-loop method, provides adequate exposure of the papilla, facilitating hemostasis in patients with post-ES bleeding.

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Video 1 Endoscopic hemostasis, achieved using the multiloop traction method for post-sphincterotomy bleeding of the peridiverticular papilla.

Fig. 1 Endoscopy revealed that the unidentifiable bleeding source was in the peridiverticular papilla.

Fig. 2 How to make the multiloop traction loop (M-loop). A 3–0 silk suture thread was reeled around a 2.5-ml syringe, and multiple knots were made. The M-loop thread was created by repeating this process. The redundant thread of the M-loop was tied to the claw of a SureClip (Micro-Tech, Nanjing, China).

Competing interests

A. Katanuma has received honoraria as lecture fee from Olympus Co., Tokyo, Japan. All other authors declare that they have no conflict of interest.
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