

A novel sphincterotome facilitates endoscopic sphincterotomy in patients with Roux-en-Y gastrectomy

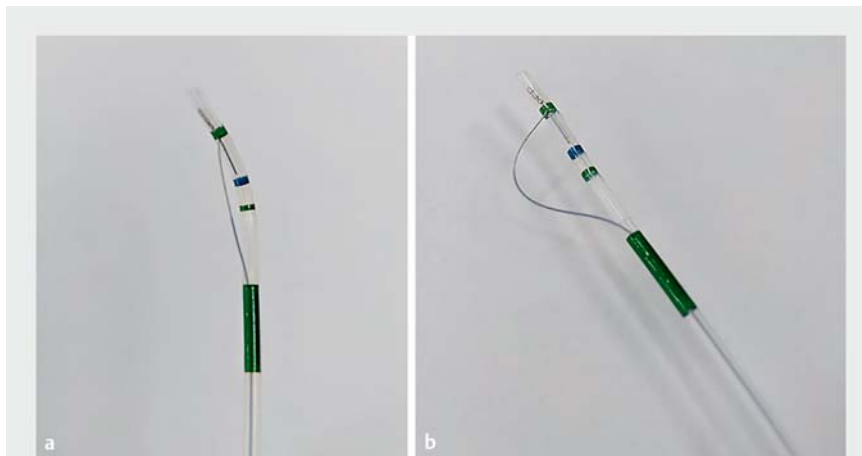
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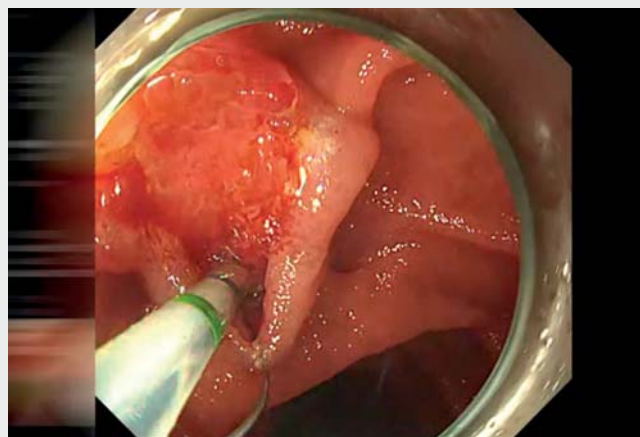
► **Fig. 1** The new sphincterotome (New CleverCut3V; KD-V410V-0720; Olympus Medical Systems, Tokyo, Japan), with a working length of 240 cm for balloon enteroscopy-assisted endoscopic retrograde cholangiopancreatography in patients with surgically altered anatomy.

Endoscopic retrograde cholangiopancreatography (ERCP) using a short-type single-balloon enteroscope (short SBE) (SIF-H290; Olympus Medical Systems, Tokyo, Japan), with a working length of 152 cm and a working channel diameter of 3.2 mm, has been reported to be effective in patients with surgically altered anatomy (SAA) [1–3]. However, endoscopic sphincterotomy (ES) in such patients is challenging, as the appearance of the papilla is inverted and the position is frequently tangential, which makes visualizing the correct incision direction difficult. Despite the effectiveness of reported devices, they do not always achieve the correct incision direction [4, 5].

To overcome this limitation, a new sphincterotome (New CleverCut3V; KD-V410V-0720; Olympus Medical Systems), with a working length of 240 cm, was developed for balloon enteroscopy-assisted ERCP in patients with SAA (► **Fig. 1**). The blade of the sphincterotome can be easily adjusted around the 5 o'clock position, which indicates the bile duct direction in



► **Fig. 2** The blade can be easily adjusted according to the required incision direction. **a** The blade can be stretched. **b** The blade can also be loosened.

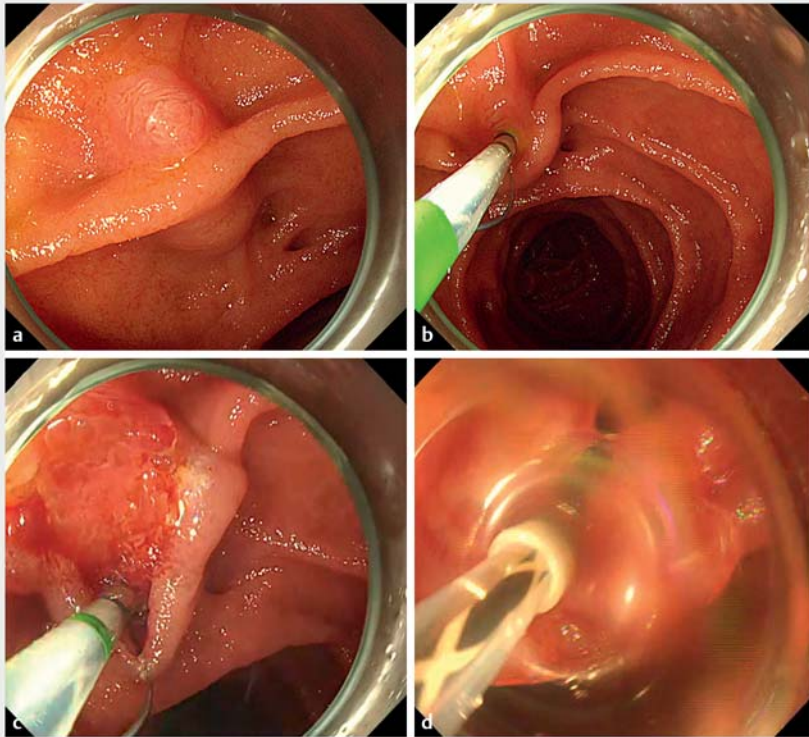


► **Video 1** Successful endoscopic sphincterotomy using a novel sphincterotome in a patient with Roux-en-Y gastrectomy.

patients with SAA. Moreover, the blade can be stretched and loosened to modify the incision direction (► **Fig. 2**). We report a case of successful ES using this novel sphincterotome in a patient with SAA.

A 47-year-old woman presented with cholangitis due to suspected debris in the common bile duct (CBD). She had

undergone total gastrectomy with Roux-en-Y for gastric cancer. ERCP was performed using a short SBE (► **Video 1**). As there was a native papilla (► **Fig. 3 a**), ES was needed to clear the debris from the CBD. The new sphincterotome was inserted into the papilla after selective biliary cannulation. The blade was easily adjusted to the 5 o'clock position (► **Fig.**



► **Fig. 3** Endoscopic findings of the procedure. **a** A native papilla was confirmed. **b** The blade was easily adjusted to the 5 o'clock position. **c** Endoscopic sphincterotomy was safely performed while confirming the correct incision direction for the bile duct. **d** Clearing the common bile duct was completed smoothly using a balloon catheter.

3 b) before ES was safely performed in the correct incision direction (► **Fig. 3 c**). Clearing the CBD was completed smoothly using a balloon catheter (► **Fig. 3 d**). This novel sphincterotome achieved effective and safe ES in patients with SAA. It may aid in the standardization of ES in patients with SAA.

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Competing interests

The authors declare that they have no conflict of interest.

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