Clip-fixed endoloop: an efficacious new method for mucosal defect closure

Endoloop suturing of a mucosal defect using a two-channel scope has been shown to be efficacious [1, 2]. Recently, methods of simple, useful endoloop suturing with a single-channel scope have also been reported [3, 4]. However, fixing the first clip to determine the position of the endoloop is cumbersome. We have developed a new and efficient suturing method, the clip-fixed endoloop, that fixes the endoloop to the clip in advance.

The clip-fixed endoloop consists of the clip (ZEOCLIP ZP-CH; Zeon Medical Inc.), a clip applicator (ZP-S-195S; Zeon Medical Inc.), an endoloop (MAJ254; Olympus), and a surgical thread (Fig. 1a). Video 1 shows how to perform mucosal closure using the clip-fixed endoloop. First, the tip of the endoloop is fixed to the clip’s teeth with surgical thread (Fig. 1b). The clip-fixed endoloop is housed in the outer sheath of the clip by moving the outer slider distally until the clip-fixed endoloop is completely hidden in the outer sheath (Fig. 1c). It is opened by slowly moving the outer sheath until it is endoscopically confirmed that the endoloop is properly open.

The patient had a 40-mm sessile serrated adenoma in the descending colon. ESD was performed; the area of the mucosal defect after ESD was slightly larger than 40 mm (Fig. 2a). The clip-fixed endoloop was inserted through the working channel of the endoscope and was confirmed to be opening properly (Fig. 2b). It was then fixed onto the normal mucosa near the mucosal defect (Fig. 2c). Four metal clips were used to anchor the endoloop around the edge of the mucosal defect. The endoloop tail was then grasped by a hook device (HX-20Q-1; Olympus) and the endoloop was tightened to close the...
defect. Additional clips were added to the remaining mucosal defect to ensure it was completely sutured (▶Fig. 2 d).

By fixing the endoloop to the clip in advance and housing it in the outer sheath, we have made simple and efficient suturing of a mucosal defect possible.

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Competing interests

None

References


Bibliography
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The authors

Tatsuma Nomura1, Makoto Kobayashi2, Takaaki Morikawa1, Noriyuki Horiki3
1 Department of Gastroenterology, Kinan Hospital, Minamimuro, Mie, Japan
2 Department of Gastroenterology, Yokkaichi Municipal Hospital, Yokkaichi, Mie, Japan
3 Department of Endoscopy, Mie University School of Medicine Tsu, Mie, Japan

Corresponding author

Tatsuma Nomura, MD
Department of Gastroenterology, Kinan Hospital, 4750 Atawa, Mihama-cho, Minamimuro-gun, Mie 519-5293, Japan
Fax: +815-9792-3357
m06076tn@icloud.com

Fig. 2 Endoscopic images showing: a a mucosal defect with an area > 40 mm post-endoscopic submucosal dissection; b the clip-fixed endoloop, which has been inserted into the working channel of the endoscope, and is confirmed to be opening properly; c the clip-fixed endoloop having been fixed to the normal mucosa near the mucosal defect; d complete closure of the mucosal defect following application of the clip-fixed endoloop and a number of additional clips.