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 (ZEOLIP ZP-CH; Zeon Medical Inc.), a clip applicator (ZP-S-195S; Zeon Medical Inc.), an endoloop (MAJ254; Olympus), and a surgical thread (▶Fig. 1a).

▶Video1 shows how to perform mucosal closure using the clip-fixed endoloop. First, the tip of 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.

▶Video1 shows how the mucosal defect is sutured after colorectal endoscopic submucosal dissection (ESD) using the clip-fixed endoloop. 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. 2d). 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.

Endoscopy_UCTN_Code_TTT_1AQ_2AD

Competing interests

None

References


Bibliography

DOI https://doi.org/10.1055/s-0044-101025
Published online: 21.2.2018
Endoscopy 2018; 50: E126–E127
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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▶ 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.