

Endoscopic mucosa–submucosal clip closure method

It is desirable to perform a prophylactic closure using endoclips in patients who are at high risk of delayed bleeding or perforation after endoscopic resection [1]. A mucosal defect after endoscopic mucosal resection can be closed with sequential endoclips as if zipping up the mucosal edges. However, it is difficult to close a large mucosal defect after endoscopic submucosal dissection (ESD) using only conventional endoclips. Several methods have been reported, such as the “slip knot clip suturing method” [2] and the “endoscopic hand-suturing” technique [3]. However, these endoscopic closure methods can be difficult, and require a string or special device, which is not always available and takes time to apply. This report describes a simpler closure method using conventional endoclips.

In the “mucosa–submucosa clip closure method”, endoclips (EZ Clip, HX-610-090L long-type; Olympus, Tokyo, Japan) are placed at the edge of the mucosal defect after colorectal ESD. Each arm of the endoclip grips the mucosa and submucosa, respectively. The direction in which the endoclip grips is parallel to the short axis of the defect. Several endoclips are applied in this way, and the mucosal defect is significantly reduced in size. Then, additional endoclips can be applied to both sides of the mucosal defect. Several endoclips are required to achieve complete closure (▶ **Video 1**).

This method is simple, and greatly facilitates complete closure of a large mucosal defect simply by applying conventional endoclips.

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▶ **Video 1** Mucosa–submucosa clip closure method. **a** A mucosal defect after colonic endoscopic submucosal dissection. **b** Endoclips are placed at the edge of the mucosal defect. Each arm of the endoclip hooks mucosa and submucosa, respectively. The direction in which the endoclip grips is parallel to the short axis of the defect. **c** Several endoclips are applied to the mucosal edge in the same way, bringing the mucosal edges close to each other and enabling application of clips to both sides of the mucosa. **d** Additional endoclips are placed to achieve complete closure.

Competing interests

None

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References

- [1] Liaquat H, Rohn E, Rex DK. Prophylactic clip closure reduced the risk of delayed post-polypectomy hemorrhage: experience in 277 clipped large sessile or flat colorectal lesions and 247 control lesions. *Gastrointest Endosc* 2013; 77: 401–407
- [2] Nishizawa T, Ochiai Y, Uraoka T et al. Endoscopic slip-knot clip suturing method: prospective pilot study (with video). *Gastrointest Endosc* 2017; 85: 433–437
- [3] Goto O, Sasaki M, Akimoto T et al. Endoscopic hand-suturing for defect closure after gastric endoscopic submucosal dissection: a pilot study in animals and in humans. *Endoscopy* 2017; 49: 792–797

Bibliography

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