

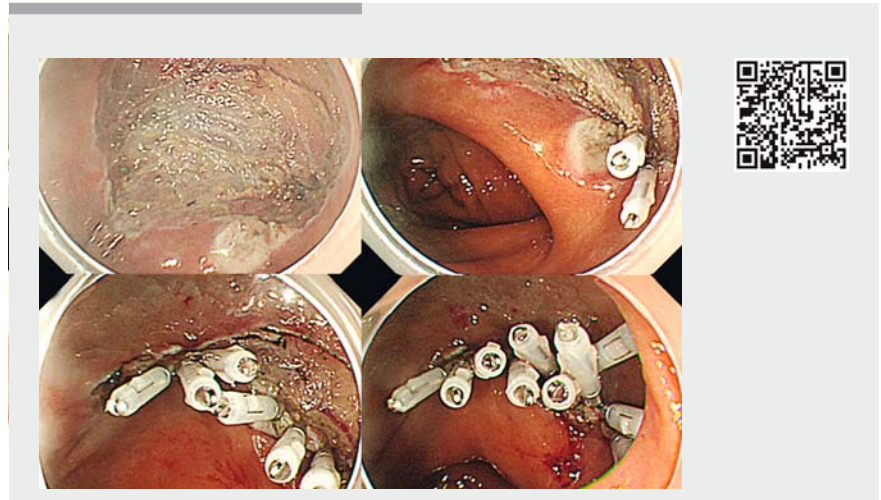
Endoscopic mucosa–submucosal clip closure method

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-610-090 L 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

The Authors

Shigeo Banno¹, Toshihiro Nishizawa^{1,2,3}, Satoshi Kinoshita^{1,2,3}, Hideki Mori^{1,2}, Toshio Uraoka^{1,3}

- 1 Department of Gastroenterology, National Hospital Organization Tokyo Medical Center, Tokyo, Japan
- 2 Department of Gastroenterology and Hepatology, Keio University School of Medicine, Tokyo, Japan
- 3 Division of Research and Development for Minimally Invasive Treatment, Cancer Center, Keio University School of Medicine, Tokyo, Japan

Corresponding author

Toshio Uraoka, MD, PhD

Department of Gastroenterology, National Hospital Organization Tokyo Medical Center, 2-5-1 Higashigaoka, Meguro-ku, Tokyo 152-8902, Japan
Fax: +81-3-53633967
toshi_urao@yahoo.co.jp

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