

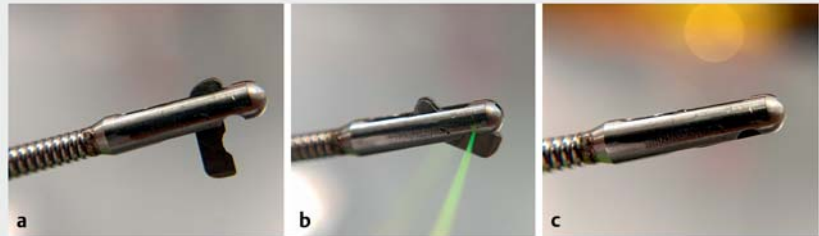


Application of a new loop cutter for nylon lines and the reopenable clip-over-line method for large defect closure after duodenal endoscopic submucosal dissection

Various mucosal defect closure methods have been developed to close the mucosal defects left after duodenal endoscopic submucosal dissection (ESD). Several methods involve a clip and a line, with the line needing to be cut at the end of the procedure [1, 2]. We therefore developed a locking-clip technique, wherein the line is fixed to the clip and then cut after being fixed to the normal mucosa [3, 4]; however, the locking-clip technique takes several minutes to perform. Recently, a disposable loop cutter (FS-5L-1; Olympus) was developed to easily cut the lines and loops [5]. The loop cutter (► **Fig. 1**) can be used with an endoscope and a 2.8-mm accessory channel. It has a rotational function and can easily open and close its teeth. The line can easily be cut vertically or tangentially, and the elastic bands can easily be cut as well. We here report the application of the most recent loop cutter after complete defect closure using the reopenable clip-over-line method (ROLM) twice in a patient who underwent duodenal ESD (► **Video 1**).

The patient was a 59-year-old woman with a tumor in the duodenum (► **Fig. 2 a, b**). The tumor was resected en bloc by ESD, with the long axis of the defect measuring 90 mm (► **Fig. 2 c**). Because of the irregular shape of the mucosal defect, the ROLM was used twice to completely close the defect. The first ROLM was performed on the anal part of the defect (► **Fig. 2 d**); thereafter, the line was cut with the new loop cutter (► **Fig. 2 e**). Approximately 1 cm of the line was left as it did not loosen owing to friction. The second ROLM was performed on the remaining defect to ensure complete closure (► **Fig. 2 f, g**). The line was then cut with a loop cutter in a similar manner (► **Fig. 2 h**). The double use of ROLM ensured complete defect closure (► **Fig. 2 i**).

Endoscopy_UCTN_Code_TTT_1AO_2AG



► **Fig. 1** Photographs of the new loop cutter: **a** in the opened state; **b** holding the line; **c** in the closed state.



► **Video 1** Defect closure using a new loop cutter and a reopenable clip-over-line method after duodenal endoscopic submucosal dissection.

Competing interests

The authors declare that they have no conflict of interest.

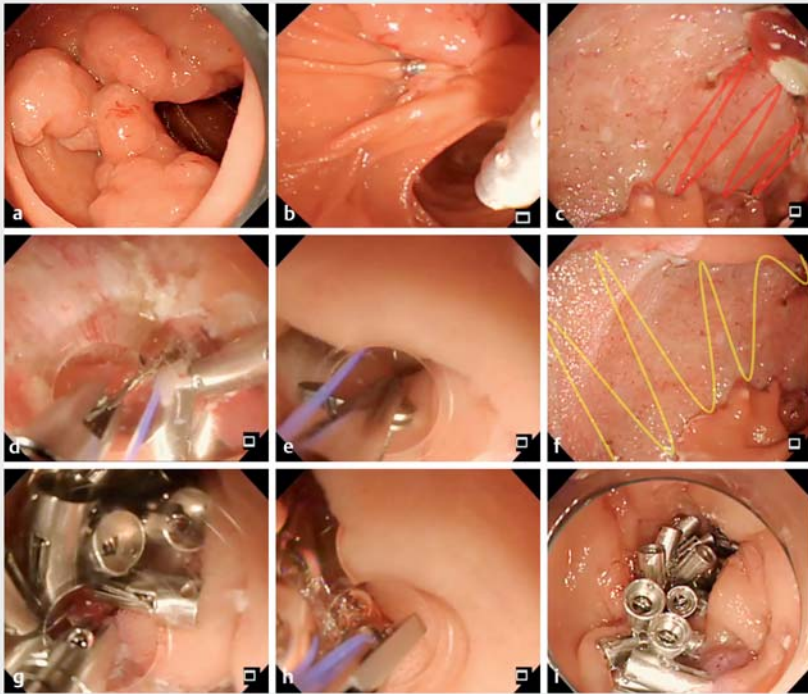
The authors

Tatsuma Nomura^{1,2}, Shinya Sugimoto¹, Jun Oyamada¹, Keiichi Ito², Akira Kamei¹

- 1 Department of Gastroenterology, Ise Red Cross Hospital, Ise, Mie, Japan
- 2 Department of Gastroenterology, Mie Prefectural Shima Hospital, Shima, Mie, Japan

Corresponding author

Tatsuma Nomura, MD
Department of Gastroenterology, Ise Red Cross Hospital, 1-471-2 Funae, Ise, Mie, 516-8512, Japan
m06076tn@icloud.com



► **Fig. 2** Endoscopic images during closure of a duodenal defect using the reopenable clip over-line method (ROLM) and the new loop cutter to cut the line showing: **a** tumor in the duodenum measuring 80 mm in size; **b** a marking clip placed using a duodenoscope between the papilla and the tumor; **c** the mucosal defect after resection, the long axis of which was 90 mm, with the closure line marked (red line) and the first application of the ROLM; **d** partial closure of the mucosal defect after the first ROLM; **e** cutting of the line after the first ROLM using the new loop cutter; **f** the closure line for the second ROLM (yellow line); **g** closure of the mucosal defect with the second ROLM; **h** cutting of the line after the second ROLM using the new loop cutter; **i** the completely closed mucosal defect.

References

- [1] Kato M, Ochiai Y, Fukuhara S et al. Clinical impact of closure of the mucosal defect after duodenal endoscopic submucosal dissection. *Gastrointest Endosc* 2019; 89: 87–93
- [2] Nomura T, Sugimoto S, Temma T et al. Reopenable clip over-the-line method with muscle layer grasping clips for large duodenal post-endoscopic submucosal dissection defects. *Endoscopy* 2022; 54: E782–E783
- [3] Nomura T, Sugimoto S, Kawabata M et al. Large colorectal mucosal defect closure post-endoscopic submucosal dissection using the reopenable clip over line method and modified locking-clip technique. *Endoscopy* 2022; 54: E63–E64
- [4] Nomura T, Sugimoto S, Temma T et al. Suturing techniques with endoscopic clips and special devices after endoscopic resection. *Dig Endosc* 2022. doi:10.1111/den.14427
- [5] Akimoto T, Goto O, Sasaki M et al. Endoscopic suturing promotes healing of mucosal defects after gastric endoscopic submucosal dissection: endoscopic and histological analyses in in vivo porcine models (with video). *Gastrointest Endosc* 2020; 91: 1172–1182

Bibliography

Endoscopy 2023; 55: E503–E504

DOI 10.1055/a-2032-3697

ISSN 0013-726X

© 2023. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (<https://creativecommons.org/licenses/by-nc-nd/4.0/>)

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany



ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply, discounts and waivers acc. to HINARI are available.

This section has its own submission website at

<https://mc.manuscriptcentral.com/e-videos>