Usefulness of a clutch cutter combined with an S-O clip in improving stability when opening the pocket in the pocket-creation method

The pocket-creation method (PCM) is a useful resection technique that has been developed to overcome difficulties in colorectal endoscopic submucosal dissection (ESD) [1,2]. However, this technique itself poses certain challenges in resection when opening the pocket, particularly when there are considerable respiratory changes. Here, we report the usefulness of combining a clutch cutter [3] – a scissor-type knife – with an S-O clip [4] for overcoming instability when opening the pocket in the PCM.

A 76-year-old man underwent ESD for a 23-mm type IIa tumor on the cecum. Marked respiratory changes were observed. We first created a pocket using a clutch cutter. Next, adequate dissection directly beneath the lesion was performed under a stable visual field. When opening the pocket, marked respiratory changes were observed again. An S-O clip was attached to the anal side of the lesion, and once traction was obtained (► **Fig. 1**), the surrounding normal mucosa and submucosa were cut in a manner similar to cutting paper (paper cutting technique [PCT]), and the tumor was removed (► **Fig. 2**). Even with respiratory changes, resection could be safely performed because the lesion was anchored by the S-O clip, as well as by the clutch cutter, and the procedure was completed without any complications (► **Video 1**).

Previously, a tip-type knife was used for PCM; however, for lesions beyond the sigmoid colon with major respiratory changes, instability when opening the pocket was frequently experienced despite the use of an S-O clip. This problem was subsequently overcome by the combined use of a clutch cutter only when opening the pocket. We present this video report of the PCT as an aid for novice surgeons performing colorectal ESD.

► **Fig. 1** Figure showing a submucosal pocket that was created and the lesion with an S-O clip attached. **a** We created a submucosal pocket under most of the lesion using a clutch cutter. **b** An S-O clip was attached to the anal side of the lesion, and traction was obtained.

► **Video 1** Video showing the usefulness of the paper cutting technique for overcoming instability when opening the pocket in the pocket-creation method.

The PCT is useful for overcoming instability when opening the pocket in the PCM.

Endoscopy_UCTN_Code_TTT_1AQ_2AD

Competing interests

None

► **Fig. 2** The normal mucosa and submucosa surrounding the lesion were cut in a manner similar to cutting paper (paper cutting technique). **a** Cutting on the left side. **b, c** Cutting on the right side.

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DOI <https://doi.org/10.1055/a-1024-3566>
Published online: 25.10.2019
Endoscopy 2020; 52: E128–E129
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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