Jejunal endoscopic submucosal dissection is feasible using the pocket-creation method and balloon-assisted endoscopy

Endoscopic submucosal dissection (ESD) is widely used for the resection of superficial gastrointestinal neoplasms. Previously, we reported that the pocket-creation method (PCM) overcomes difficulties in ESD, such as in duodenal lesions [1] and subpedunculated neoplastic lesions [2]. Here, we describe the use of the PCM to facilitate ESD of a jejunal lesion.

A 54-year-old woman with familial adenomatous polyposis was referred for resection of a large adenoma in the proximal jejunum. Laparotomy would have been difficult owing to adhesions from previous surgery. Good maneuverability was confirmed in the vicinity of the lesion by double-balloon endoscopy (▶ Fig. 1), and we performed ESD using the PCM and balloon-assisted endoscopy (BAE). An endoscope with a 3.2-mm working channel (EI-580BT; Fujifilm, Tokyo, Japan) and a small-caliber-tip transparent hood (ST hood; DH-15GR; Fujifilm) were used. The endoscope tip balloon was not attached because the lesion was located in the upper jejunum. The Hook knife (Olympus, Tokyo, Japan) was used for most of the dissection. The key feature of the PCM is entering and dissecting the submucosal layer to make a pocket using an ST hood after a minimal mucosal incision (▶ Fig. 2). After creation of the submucosal pocket under the entire tumor, an additional mucosal incision was made and submucosal dissection performed. Use of the PCM for ESD with BAE safely

Fig. 1 Advantages of balloon-assisted endoscopy (BAE) compared with push enteroscopy. a Push enteroscopy becomes unstable owing to stretching of the gastric and duodenal walls. b By using BAE, the overtube with a balloon prevents a redundant loop, enabling accurate and stable operation without paradoxical movements.
achieved an en bloc resection of the tumor (▶ Video 1). The PCM has four main advantages including: (i) maintaining a thick submu-
cosal layer with a minimal incision; (ii) obtaining good traction by using an ST 
hood; (iii) conquering the vertical 
approach by adjusting the direction of 
the endoscope tip; and (iv) stabilizing 
the endoscope tip by synchronizing the 
endoscope and the pocket [1]. By using 
BAE, the overtube with a balloon prevents 
formation of a redundant loop, enabling 
accurate and stable operation without 
paradoxical movements (▶ Fig. 1) [3].

Endoscopy_UCTN_Code_TTT_1AP_2AD

Competing interests

Hironori Yamamoto has patents for ESD devices and double-balloon endoscopy produced by Fujifilm Corporation. He also has a consultant relationship with the Fujifilm Corpora-
tion and has received honoraria, grants, and royalties from the compa-
nym. Yoshimasa Miura, Tomonori Yano, 
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(Suppl. 01): E421 – E422

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DOI https://doi.org/110.1055/a-0626-6893
Endoscopy 2018; 50: 931 – 932
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

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