Retrieval of a large resected specimen using a large-caliber cap after colorectal endoscopic submucosal dissection

► **Fig. 1** Large tumor located in the rectosigmoid colon. **a** Overview of the tumor. **b** The cap is a large-caliber device; however, it can be inserted easily through the anal canal because the cap is transparent, oblique, and soft.

► **Video 1** Retrieval of a large resected specimen using a large-caliber cap after colorectal endoscopic submucosal dissection.

► **Fig. 2** Large-caliber (outer diameter 18 mm) oblique soft cap (D-206; Olympus, Tokyo, Japan) was placed on the tip of the endoscope.

Endoscopic submucosal dissection (ESD) has emerged as a feasible treatment option for colorectal tumors [1]. However, large colorectal specimens obtained via ESD that are difficult to retrieve from the anal canal are often encountered. We have experienced a few cases of specimen fragmentation during retrieval. Precise histological evaluation requires an intact specimen and fragmentation should be avoided. Several recent re-

ports have described useful techniques for the retrieval of intact resected specimens [2–4]; however, these reported methods are relatively complex. We describe a more convenient and easy way of retrieving resected specimens using a large-caliber cap.

The first case involves a 73-year-old man who underwent ESD for a large laterally spreading tumor (LST) located in the rectosigmoid colon (► **Fig. 1 a**). We removed

the tumor via en bloc resection using a DualKnife (Olympus, Tokyo, Japan) and a short-type small-caliber-tip transparent cap (Fujifilm, Tokyo, Japan). Because the resected specimen measured over 10 cm, its retrieval from the anal canal was very difficult. Therefore, a large-caliber (outer diameter 18 mm) oblique soft cap (D-206; Olympus) for cap-assisted endoscopic mucosal resection [5] was placed on the tip of the endoscope (► **Fig. 2**). We suctioned the resected specimen into the cap and retrieved it easily from the anal canal (► **Fig. 1 b**, ► **Video 1**). Because the cap could pass through the anal canal while protecting the resected specimen, the resected specimen did not fragment. Precise histological evaluation revealed negative margins.

The second case involved a 68-year-old man who underwent ESD for a large LST located in the upper rectum (► **Fig. 3 a**). The tumor was removed via en bloc resection, and was easily retrieved using the same method as that described above (► **Fig. 3 b**, ► **Video 1**). Since 2014, we have used this method to successfully retrieve specimens measuring over 50 mm without fragmentation, regardless of tumor shape.

Endoscopy_UCTN_Code_TTT_1AQ_2AD

► **Fig. 3** Large tumor located in the upper rectum. **a** Overview of the tumor. **b** Resected specimen. Histological evaluation revealed that the cut margins were negative for intramucosal cancer.

Competing interests

None

The authors

Yuichiro Kuroki, Kunio Asonuma, Natsumi Uehara, Toshiyuki Endo, Reika Suzuki, Yorimasa Yamamoto, Masatsugu Nagahama
Department of Gastroenterology, Showa University Fujigaoka Hospital, Kanagawa, Japan

Corresponding author

Yuichiro Kuroki, MD

Department of Gastroenterology, Showa University Fujigaoka Hospital, 1-30 Fujigaoka, Aoba-ku, Yokohama 227-8501, Japan
Fax: +81-45-9713824
yu-kuroki@med.showa-u.ac.jp

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DOI <https://doi.org/10.1055/a-0915-1785>

Published online: 23.5.2019

Endoscopy 2019; 51: E299–E300

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Stuttgart · New York

ISSN 0013-726X

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