Introduction

Endoscopic submucosal dissection (ESD) is an established treatment for gastric neoplasms. However, gastric ESD at the greater curvature of the fundus near the cardia is a challenging procedure because of its technical difficulties [1]. Here, we report the usefulness of a modified attachment method using an S-O clip (ZEON Medical, Japan) [2–4] and multibending scope (M-scope, GIF-2T240M; Olympus, Japan) for ESD at this location.

Video

A 58-year-old man underwent ESD for a 10-mm type 0-IIa tumor (gastric adenocarcinoma of fundic-gland type) at the greater curvature of the fundus near the cardia (▶Fig. 1). A conventional endoscope could not reach this lesion with good operability for ESD. We selected the M-scope to reach this lesion and improve the operability for ESD.

After the lesion was separated from the peripheral mucosa circumferentially using a dual knife (KD-650L, Olympus) and IT knife2 (KD-611L, Olympus), the anchor site was marked with the dual knife. An S-O clip was attached to the edge of the oral side of this lesion (▶Fig. 2a) and the S-O clip was anchored on the opposite side at the greater curvature in the upper third of the stomach to place the spring extension in the appropriate direction (▶Fig. 2b). Good visualization of the submucosa and adequate traction were obtained with extension of the spring (▶Fig. 2c). Even with respirator movement and technical difficulties, resection was performed safely with the dual knife in 25 minutes with no complications (▶Video 1, ▶Fig. 2d).

Although natural traction can be obtained in this location to flap up the specimen, it is difficult to manipulate the entry to create the flap because the traction force gets weaker during the first half of the ESD procedure and the endoscope faces the lesion vertically. This problem was overcome with combined use of an S-O clip and M-scope to obtain good visualization of the submucosa and good operability for ESD and it was as easy as using dental floss for clip traction [5]. Therefore, this method may contribute to making the ESD procedure technically less complicated without compro-

▶Fig. 1 White light images of early gastric cancer (gastric adenocarcinoma of fundic-gland type). A 0-IIa lesion was located at the greater curvature of the fundus near the cardia. Pathological diagnosis: U, 0-IIa, 9x6 mm, gastric adenocarcinoma of fundic-gland type, pT1b/SM2 (600 µm), UL0, ly0, V0, HM0, VM0.

▶Fig. 2 Traction ESD with an S-O clip. a After circumferential mucosal incision, an S-O clip was applied to the edge of the oral side of the lesion. b The S-O clip was anchored on the opposite side at the greater curvature in the upper third of the stomach. c Good visualization of the submucosa and adequate traction were obtained. d Complete en bloc resection was achieved without any complications.
mising safety, especially during flap crea-
tion. We believe that this newly devel-
oped procedure is useful for not only be-
giners but also specialists.

Competing interests

The authors declare that they have no con-
flct of interest.

The authors

Hiroya Ueyama1, Takashi Murakami1, Kenshi
Matsumoto1, Naoto Sakamoto1, Taro Osada1,
Takashi Yao2, Akihito Nagahara1
1 Department of Gastroenterology, Juntendo
University, School of Medicine, Tokyo, Japan
2 Department of Human Pathology, Juntendo
University Graduate School of Medicine,
Tokyo, Japan

Corresponding author

Hiroya Ueyama, MD, PhD
Department of Gastroenterology, Juntendo
University School of Medicine, 2-1-1 Hongo,
Bunkyo-Ku, Tokyo 113-8421, Japan
Fax: +81-3-3813-8862
psyro@juntendo.ac.jp

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