Salvage treatment for any remaining early gastric cancer after endoscopic resection is a challenge. Conventional endoscopic mucosal resection (EMR) is difficult for such lesions because severe submucosal fibrosis prevents lifting of the mucosa during submucosal injection. Endoscopic submucosal dissection (ESD) is an option in such cases but requires considerable expertise. Underwater EMR (UEMR), which was proposed by Binmoeller et al. in 2012 for the resection of colorectal polyps, involves filling the lumen with water instead of using a submucosal injection [1, 2]. UEMR has also been adapted for recurrent lesions after piecemeal resection of colorectal polyps and duodenal lesions because of its safety and simplicity [3, 4].

An 84-year-old woman was admitted to her local hospital for treatment of early gastric cancer. ESD was attempted but was interrupted because of an intraoperative perforation. The patient was referred to our hospital for treatment of the remaining early gastric cancer (Fig. 1). We performed UEMR, with the patient under deep sedation, as salvage treatment for a 15-mm protruding lesion in the greater curvature of the gastric angle (Fig. 2; Video 1). Upper gastrointestinal endoscopy with the waterjet function was used. The lumen was filled with normal saline instead of air. Water immersion enabled us to float the lesion and identify its base (Fig. 3a). Moreover, it became easier to secure the operating space. We achieved en bloc resection with a 25-mm snare (Snare Master Plus; Olympus Co., Tokyo, Japan) and an electrosurgical unit (VIO300D; ERBE, Tübingen, Germany) which was set at Endocut Q mode (effect 3) and Forced Coag mode (effect 2) (Fig. 3b). The procedure was completed within 3 minutes without adverse events. No apparent residual tumor was seen around the resected area (Fig. 3c).

Pathological examination showed an intramucosal, well differentiated tubular adenocarcinoma with clear resection margins (Fig. 4). UEMR can be an effective salvage treatment for lesions with submucosal fibrosis.

Competing interests

None
The authors
Hiroyoshi Iwagami, Takashi Kanesaka, Ryu Ishihara, Noriya Uedo
Department of Gastrointestinal Oncology, Osaka International Cancer Institute, Osaka, Japan

Corresponding author
Ryu Ishihara, MD
Department of Gastrointestinal Oncology, Osaka International Cancer Institute, 3-1-69 Otemae, Chuo-ku, Osaka 541-8567, Japan
Phone: +81-6-6945-1181
Fax: +81-6-6945-1902
ryu1486@gmail.com

References

Bibliography
DOI https://doi.org/10.1055/a-0875-3429
Published online: 17.4.2019
Endoscopy 2019; 51: E229–E230
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

Fig. 3 Endoscopic images taken during underwater endoscopic mucosal resection showing: a floating of the lesion being facilitated by water immersion (white arrows show the lesion boundary); b the base of the lesion being snared with a 25-mm snare; c no evidence of residual tumor around the resected part of the lesion.

Fig. 4 Pathology of the resected specimen on: a macroscopic view; b histologic view, revealing a well differentiated tubular adenocarcinoma confined to the mucosa, with clear resection margins.

Endoscopy E-Videos
https://eref.thieme.de/e-videos

Endoscopy E-Videos is a free 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.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos