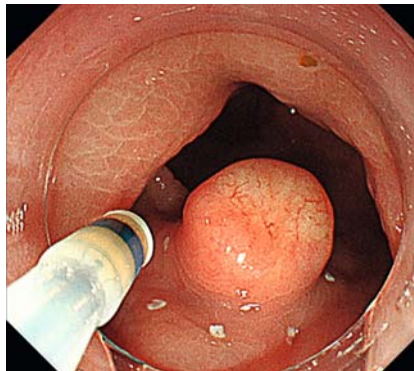


A neuroendocrine tumor improper for ligation with suction was resected en bloc by underwater endoscopic submucosal dissection

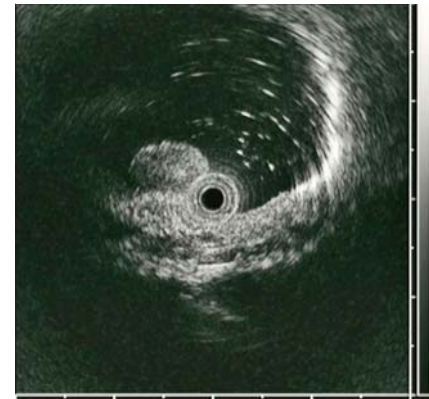


For rectal neuroendocrine tumors (NETs) smaller than 10 mm, a meta-analysis indicated that endoscopic mucosal resection with suction, such as using a cap-fitted endoscope or ligating device, had a higher complete resection rate and significantly shorter procedure time compared to endoscopic submucosal dissection (ESD) [1]. In contrast, for NETs 10 to 14 mm in diameter that are improper for ligation with suction, ESD is feasible, although the treatment strategy has been controversial [2]. Herein, we report a case of a rectal NET that was successfully resected by underwater ESD (U-ESD) within a short time.

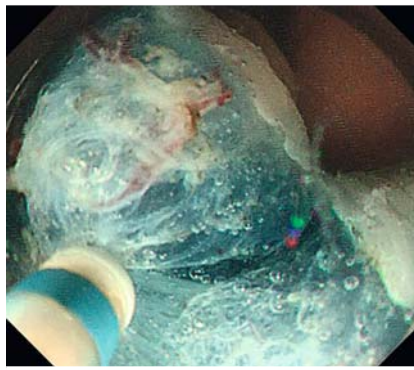
A man in his seventies underwent colonoscopy and was determined to have a slightly depressed submucosal tumor 10 mm in size in his lower rectum (► Fig. 1). The tumor was diagnosed as a NET histologically by biopsy. Endoscopic ultrasonography suggested the lesion was confined to the submucosa (► Fig. 2). Because suction was difficult due to the size of the lesion, the surgeon decided to resect it with U-ESD. The tumor was dissected in a layer just above the muscle layer and resected en bloc (► Fig. 3, ► Fig. 4; ► Video 1). The time for resection lasted 8 minutes. The wound was completely closed with clips. Histological findings showed a NET G1 according to the World Health Organization classification with a negative margin (► Fig. 5). There was no evidence of vascular invasion. U-ESD enables submucosal dissection utilizing a floating effect in a magnified view [3]. In this case, the advantages of underwater conditions made it easy to proceed with the dissection at a depth just above the muscle layer, facilitating vertical margin negative excision. In conclusion, for lesions larger than approximately 10 mm, U-ESD can be a useful option for en bloc resection



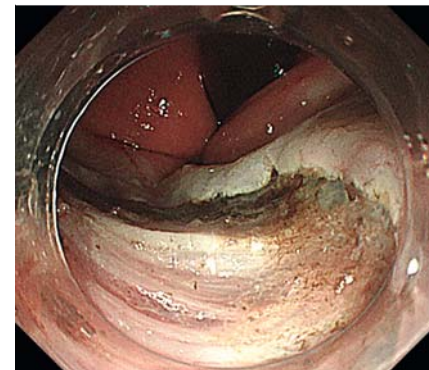
► Fig. 1 White light image before resection indicates a 10-mm yellowish, slightly depressed submucosal tumor located 2 cm from the anal verge in the lower rectum.



► Fig. 2 Endoscopic ultrasonography revealed the lesion was in the submucosa.



► Fig. 3 Submucosal dissection using a DualKnife J (KD-655Q; Olympus, Tokyo, Japan) just above the muscle layer was possible due to the floating effect in a magnified clear view in underwater conditions.



► Fig. 4 The tumor was resected in a layer just above the muscle layer.

within a time that is comparable to endoscopic mucosal resection with suction.

Endoscopy_UCTN_Code_TTT_1AQ_2AD

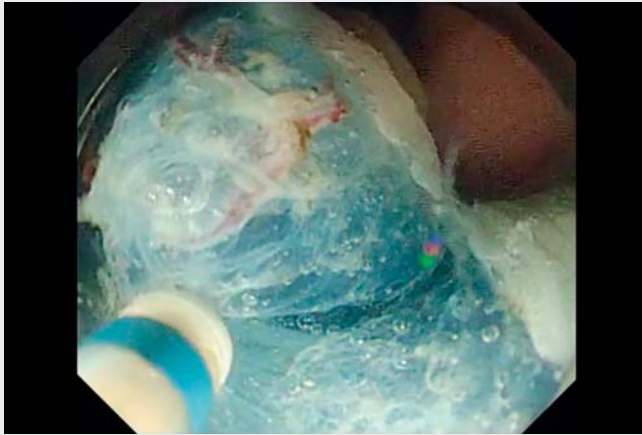
Competing interests

The authors declare that they have no conflict of interest.

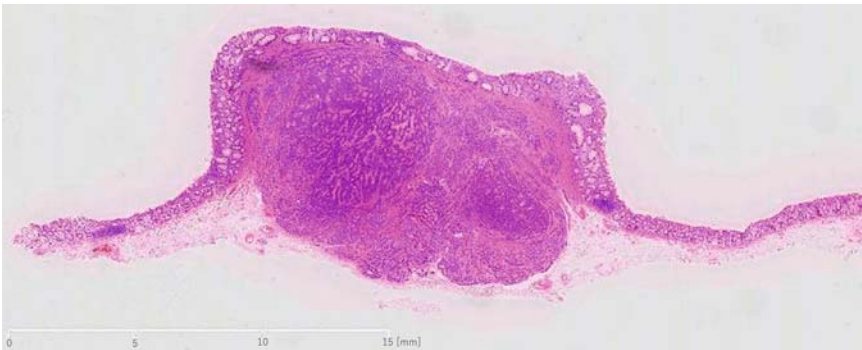
The authors

Hirota Oura Daisuke Murakami Yasuki Hatayama, Harutoshi Sugiyama, Makoto Arai, Takayoshi Nishino

Department of Gastroenterology, Tokyo Women's Medical University Yachiyo Medical Center, Chiba, Japan



▶ Video 1 Underwater endoscopic submucosal dissection for a neuroendocrine tumor in the lower rectum.



▶ Fig. 5 Histological findings of the tumor. The tumor was diagnosed as a neuroendocrine tumor G1 according to the World Health Organization classification, with a negative margin (hematoxylin–eosin staining).

Corresponding author

Daisuke Murakami, MD

Department of Gastroenterology, Tokyo Women's Medical University Yachiyo Medical Center, Owadashinden 477-96, Yachiyo-City, 276-8524, Japan
daisuke.murakami@gmail.com

References

- [1] Pan J, Zhang X, Shi Y et al. Endoscopic mucosal resection with suction vs. endoscopic submucosal dissection for small rectal neuroendocrine tumors: A meta-analysis. *Scand J Gastroenterol* 2018; 53: 1139–1145
- [2] Hamada Y, Tanaka K, Mukai K et al. Efficacy of endoscopic resection for rectal neuroendocrine tumors smaller than 15 mm. *Dig Dis Sci* 2023; 68: 3148–3157. doi:10.1007/s10620-023-07914-4
- [3] Maida M, Sferrazza S, Murino A et al. Effectiveness and safety of underwater techniques in gastrointestinal endoscopy: A comprehensive review of the literature. *Surg Endosc* 2021; 35: 37–51

Bibliography

Endoscopy 2023; 55: E1146–E1147

DOI 10.1055/a-2183-6550

ISSN 0013-726X

© 2023. The Author(s).

This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited.

(<https://creativecommons.org/licenses/by/4.0/>)

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany



ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



E-Videos is an open access online section of the journal *Endoscopy*, reporting on interesting cases

and new techniques in gastroenterological endoscopy. All papers include a high-quality video and are published with a Creative Commons CC-BY license. *Endoscopy E-Videos* qualify for HINARI discounts and waivers and eligibility is automatically checked during the submission process. We grant 100% waivers to articles whose corresponding authors are based in Group A countries and 50% waivers to those who are based in Group B countries as classified by Research4Life (see: <https://www.research4life.org/access/eligibility/>).

This section has its own submission website at

<https://mc.manuscriptcentral.com/e-videos>