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 clear view in underwater conditions [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 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.

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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).

References


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

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Endoscopy 2023; 55: E1146–E1147
DOI 10.1055/a-2183-6550
ISSN 0013-726X
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