Underwater endoscopic resection of a neuroendocrine rectal tumor

The endoscopic resection of rectal neuroendocrine tumors (NETs) results in good long-term outcomes [1]. Many techniques for the endoscopic resection of rectal NETs have been described, including polypectomy, endoscopic mucosal resection (EMR), and recently EMR with band ligation [2], endoscopic submucosal dissection [3], and even transanal endoscopic microsurgery [4]. Underwater endoscopic resection is a simple and inexpensive new technique that has been used for the treatment of polyps and flat lesions [5]. We present a case of rectal NET resected with an underwater technique (Video 1).

A 51-year-old woman was referred for the endoscopic treatment of a distal rectal NET. Colonoscopy revealed a yellowish, hardened, 10-mm lesion with a subepithelial aspect, compatible with NET (Fig. 1). Water was infused until the rectum lumen was completely filled (Fig. 2). An opened snare (SnareMaster; Olympus, Tokyo, Japan) was pushed against the rectal wall to capture a safe margin of normal mucosa (Fig. 3). Forced coagulation was used for the initial cutting, and endocut mode (ERBE Elektromedizin, Tübingen, Germany) was then used to complete the resection. In the post-procedural examination, no sign of perforation or residual lesion was observed (Fig. 4). Histologic examination of the specimen revealed a well-differentiated grade 1 NET invading the deep submucosal layer with tumor-free resection margins and without angiolymphatic or perineural invasion.

Underwater endoscopic resection of rectal NET can be a new treatment option and was feasible in this case. Case series are needed to confirm the efficacy of this technique.

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Fig. 1 Neuroendocrine rectal tumor in a 51-year-old woman.
Fig. 2 Underwater appearance of the same lesion.
Fig. 3 Underwater resection with a snare.
Fig. 4 Appearance after resection, with no residual lesion.

Video 1

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