

Video Article

Salvage treatment after endoscopic submucosal dissection for a rectal neuroendocrine tumor: Premeditated peranal endoscopic myectomy

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BRIEF EXPLANATION

ENDOSCOPIC SUBMUCOSAL DISSECTION (ESD) combined with dissection between the inner circular and outer longitudinal muscles of the lower rectum was first

reported by Honjo *et al.*¹ and subsequently reported as peranal endoscopic myectomy (PAEM) by Rahni *et al.*² and Toyonaga *et al.*³

A 66-year-old man underwent ESD at another hospital for a neuroendocrine tumor in the lower rectum. Histological

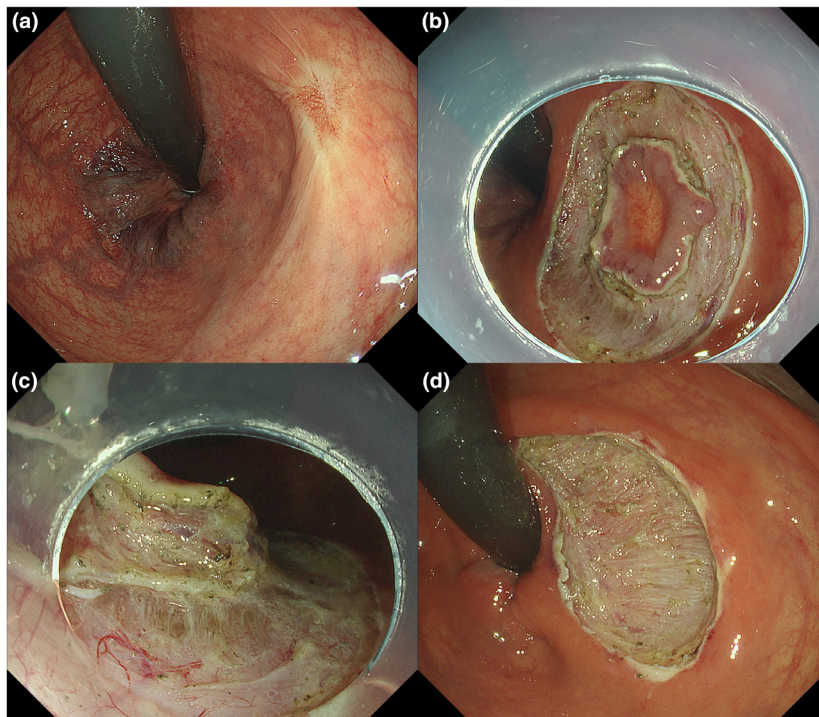


Figure 1 (a) Endoscopic submucosal dissection scar visible in the lower rectum. (b) Exposed inner circular muscle after mucosal and submucosal incision. (c) Incised inner circular muscle. (d) Exposed outer longitudinal muscle after peranal endoscopic myectomy.

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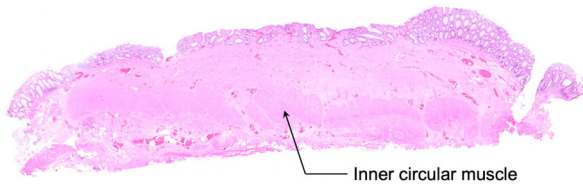


Figure 2 Histological examination of the resected specimen shows no residual tumor.

examination of the resected specimen revealed a 5 mm neuroendocrine tumor, grade 1, with a positive vertical margin. The Japanese guideline recommends additional surgery,⁴ leading to the patient's referral to our hospital. However, no apparent residual tumor was observed around the ESD scar (Fig. 1a), rendering surgery to be considered overly invasive. Conversely, PAEM has an advantage over surgery in preserving anal function. Despite limited supporting evidence, PAEM was conducted after a discussion with the surgeon (Video S1). First, the mucosa around the scar was circumferentially incised. Next, the submucosa was incised until the inner circular muscle was exposed (Fig. 1b). Subsequently, the inner circular muscle was incised (Fig. 1c) and dissected immediately below it using the clip-with-line technique. En bloc resection was achieved in 57 min without any adverse events (Fig. 1d). Antibiotics were administered prophylactically on postoperative days 0 and 1. Oral intake was resumed on postoperative day 3, and the patient was discharged on postoperative day 4 without any symptoms. Histological examination of the resected specimen, including the submucosal fibrotic tissue and the inner circular muscle, revealed no residual tumors (Fig. 2).

Noncurative factors post-ESD were a positive vertical margin and an unclear depth of tumor invasion. PAEM enabled the en bloc resection of sufficient tissue up to the muscularis propria and resolved those concerns. However, if full-thickness resection had been performed, difficult sutures near the anal canal would have been required. Therefore, PAEM might be the optimal treatment in this case.

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CONFLICT OF INTEREST

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REFERENCES

- Honjo K, Kure K, Ichikawa R *et al.* Two cases of rectal neuroendocrine tumor resection combined with dissection of the circular muscle layer using the endoscopic submucosal dissection technique. *Case Rep Gastroenterol* 2016; **10**: 693–700.
- Rahni DO, Toyonaga T, Ohara Y *et al.* First reported case of per anal endoscopic myectomy (PAEM): A novel endoscopic technique for resection of lesions with severe fibrosis in the rectum. *Endosc Int Open* 2017; **5**: E146–50.
- Toyonaga T, Ohara Y, Baba S *et al.* Peranal endoscopic myectomy (PAEM) for rectal lesions with severe fibrosis and exhibiting the muscle-retracting sign. *Endoscopy* 2018; **50**: 813–7.
- Ito T, Masui T, Komoto I *et al.* JNETS clinical practice guidelines for gastroenteropancreatic neuroendocrine neoplasms: Diagnosis, treatment, and follow-up: A synopsis. *J Gastroenterol* 2021; **56**: 1033–44.

SUPPORTING INFORMATION

ADDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

Video S1 Salvage treatment after endoscopic submucosal dissection for a rectal neuroendocrine tumor: premeditated peranal endoscopic myectomy.