

Successful resection of a 22-cm subcircumferential rectal lesion treated by endoscopic submucosal dissection with a mucosal-anchor-assisted multiple-tunnel method

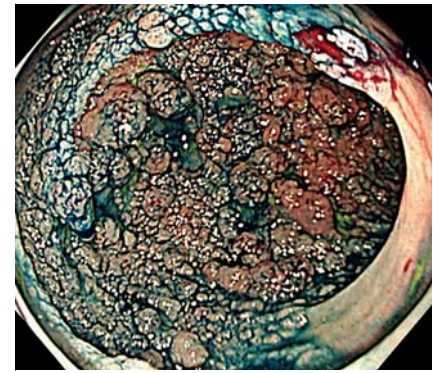
Colorectal endoscopic submucosal dissection (ESD) has become widespread since the development of devices and traction or tunnel methods, but ESD for large lesions remains challenging. In particular, when ESD using the tunnel method is used on huge lesions, if the mucosa and submucosa remaining after tunnel creation are dissected, the dissected parts will accumulate on the oral side. This makes the final dissection difficult because the advantage of gravity is lost. We report a case of ESD of a large lesion using a modified tunnel method with a mucosal anchor.

A 78-year-old man with chronic diarrhea underwent colonoscopy, which identified a subcircumferential laterally spreading tumor occupying nearly the entire rectum (► Fig. 1, ► Fig. 2). Because magnifying endoscopic examination provided no clear evidence of a submucosal invasive carcinoma, ESD was performed (► Video 1). After three tunnels had been created, the anal-side mucosa was left in place as an anchor to maintain good traction until the final dissection. The submucosal tunnels allowed easy identification of the dissection line, and a mucosal anchor prevented the lesion from gathering on the oral side (► Fig. 3). Finally, the remaining mucosal anchors were removed, and ESD was completed without complications (► Fig. 4). Histopathology indicated a well-differentiated intramucosal adenocarcinoma, 220×150 mm in size, with negative resection margins and no lymphovascular invasion. At 1 and 2 months later, stenosis was observed at the ESD site, requiring three endoscopic balloon dilations (► Fig. 5). At the 6-month follow-up, the patient was asymptomatic.

There are few case reports of ESD for lesions larger than 20 cm, and those that exist all describe circumferential lesions [1,2]. In terms of stenosis, it is desirable to preserve as much mucosa as possible



► Fig. 1 Endoscopic view of a subcircumferential laterally spreading tumor in the rectum of a 78-year-old man.



► Fig. 2 Chromoendoscopic view with indigo carmine dye.

The mucosal anchor prevents the entire lesion from collecting on the oral side.

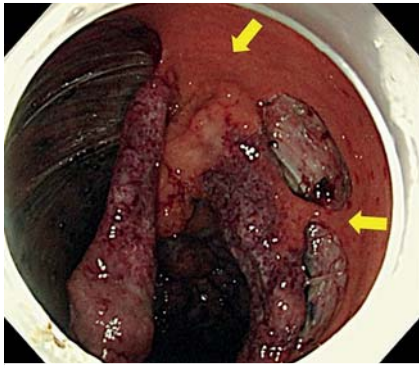
► Video 1 Subcircumferential rectal lesion treated by endoscopic submucosal dissection using a mucosal-anchor-assisted multiple-tunnel method.

[3]; however, this may be more difficult technically for subcircumferential than for circumferential lesions because peripheral incisions are required. In this case, ESD was completed safely with effective traction on the lesion by creating tunnels and leaving a mucosal anchor.

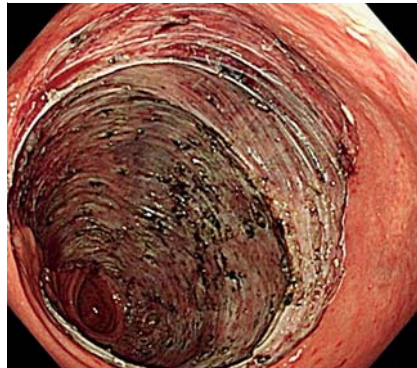
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Competing interests

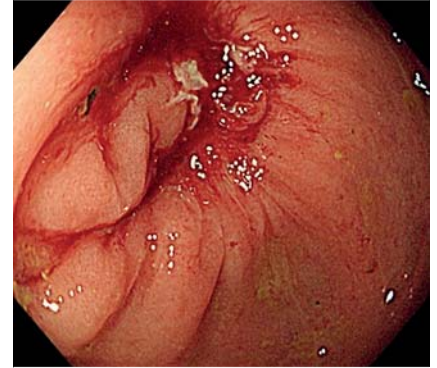
The authors declare that they have no conflict of interest.



► **Fig. 3** Endoscopic view after creation of three tunnels with a mucosal anchor (arrows).






► **Fig. 4** Ulcer floor after endoscopic submucosal dissection (ESD).



► **Fig. 5** Stenosis that occurred 2 months after ESD.

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