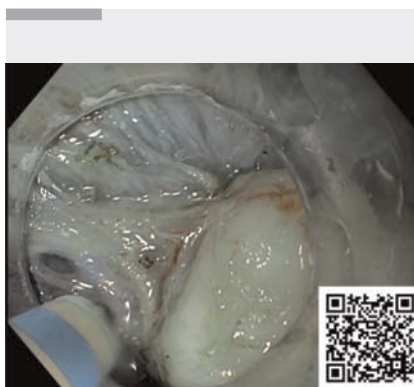


Submucosal tunneling endoscopic resection technique with intermuscular dissection for a rectal gastrointestinal stromal tumor

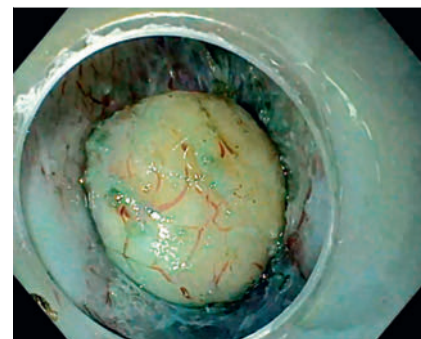
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A 54-year-old woman was referred to our center for evaluation of a subepithelial tumor located in the posterior wall of the rectum, 1 cm proximal to the anal verge. Endoscopic ultrasonography showed a 15-mm hypoechoic homogeneous submucosal lesion. Submucosal tunneling endoscopic resection (STER) was performed (▶ **Video 1**) under monitored anesthesia care, using CO₂ insufflation, a standard gastroscope (GIF-H190) with a transparent cap (D-201-10704), DualKnife J 1.5 mm (Olympus, Tokyo, Japan), and a VIO 200 D (Erbe, Tübingen, Germany). The submucosal lift was achieved with a mixture of saline solution and indigo carmine. A small horizontal incision was made at the distal margin and a submucosal pocket was created. After dissecting the subepithelial tumor from the submucosa (▶ **Fig. 1**), an intermuscular dissection assisted by a water-jet injection into the intermuscular space was performed (▶ **Fig. 2**, ▶ **Fig. 3**). Finally, the larger vessels were coagulated with a bipolar forceps (HS-D2622; Pentax, Tokyo, Japan) and the mucosal defect was closed with four 11-mm through-the-scope clips (MED-204-CLP; Meditalia, Palermo, Italy). The technical duration of the procedure was 30 minutes. The patient was discharged 2 hours later with the indication to take prophylactic oral antibiotic therapy for 5 days. No complications were reported. Histology showed a 12-mm gastrointestinal stromal tumor (GIST) surrounded by thin smooth tissue, with free margins (R0) and mitotic index <5/mm² (▶ **Fig. 4**).

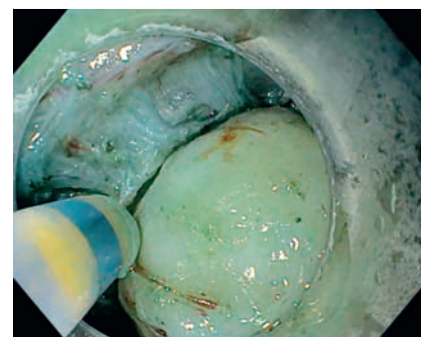
After multidisciplinary consultation, a chest and abdominal computed tomography (CT) scan with intravenous contrast was performed, which showed no patho-



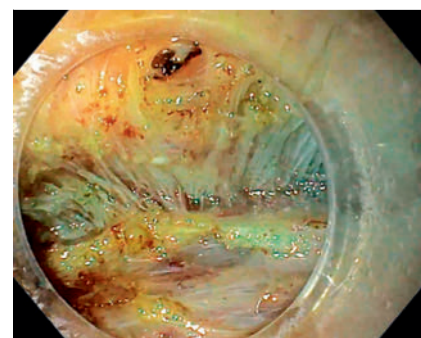
▶ **Video 1** Submucosal tunneling endoscopic resection technique with intermuscular dissection for a rectal gastrointestinal stromal tumor.



▶ **Fig. 1** GI stromal tumor in the tunnel after submucosal dissection was completed.



▶ **Fig. 2** Intermuscular dissection.



▶ **Fig. 3** Resection base showing integrity of the external longitudinal muscle.

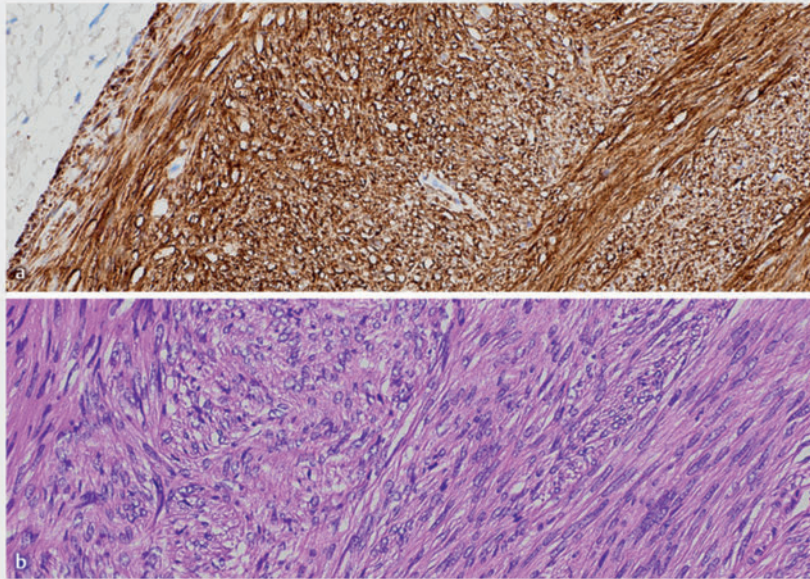
logical findings, and a postoperative follow-up observation was scheduled considering the extremely low risk of recurrence.

GISTs are rare and account for 0.6% of all rectal neoplasias [1]. To date, the best treatment regimen remains uncertain [2] and data on endoscopic resection of these tumors are scarce [3–5]. STER is emerging as a less invasive alternative to surgery for subepithelial tumors in the upper gastrointestinal tract [2] and it also seems safe and effective to treat carefully selected rectal GISTs.

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Conflict of Interest

The authors declare that they have no conflict of interest.



► **Fig. 4** Histological features. **a** DOG1 marker (immunohistochemistry, 20×). **b** Hematoxylin and eosin (20×); spindle cells, absence of necrosis.

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