

Endoscopic resection of a rectal gastrointestinal stromal tumor using the submucosal tunneling endoscopic resection (STER) technique



▶ Video 1 Endoscopic resection of a rectal gastrointestinal stromal tumor using the submucosal tunneling endoscopic resection (STER) technique.



▶ Fig. 1 Endoscopic view during submucosal tunneling endoscopic resection (STER) of a rectal gastrointestinal stromal tumor, which allows an interesting exposure of the lesion within the tunnel, particularly while making the muscular incision in the healthy margin.

The optimal treatment for a gastrointestinal stromal tumor (GIST) of the rectum is controversial owing to its extremely low incidence [1]. The submucosal tunneling endoscopic resection (STER) technique is a so-called “nonexposed” full-thickness endoscopic resection technique developed to remove upper gastrointestinal submucosal tumors (SMTs) arising from the muscularis propria [2,

3]. This technique allows a very interesting exposure of a GIST, as the axis of the knife is more tangential than when using an “exposed ESD technique”, which features a perpendicular axis that carries a risk of R1 resection. We believe that it could also be interesting for the resection of rectal SMTs. We report here the first successful use of this technique, with an accompanying video (▶ **Video 1**), for the removal of a 15-mm rectal GIST.

A 59-year-old woman was referred for endoscopic resection of a lower rectal SMT. The lesion had been discovered incidentally during a screening colonoscopy. Endoscopic ultrasound confirmed a rectal SMT arising from the muscularis propria. The STER procedure was performed using a DualKnife, starting the submucosal tunnel 3 cm upstream of the lesion. After releasing the submucosa around the tumor within this tunnel, we made a circumferential muscular incision in the healthy margin (▶ **Fig. 1**). We then carried out complete enucleation, while preserving the external muscular layer. The lesion was removed from the submucosal tunnel using tripod forceps. The tunnel

entrance was closed with five 16-mm clips.

Histopathological analysis showed complete resection of a 15-mm GIST, with a mitotic index of 14 mitoses per 5 mm², corresponding to a lesion at high risk of recurrence [4]. Molecular analysis showed the presence of a KIT exon 1 mutation. A multidisciplinary consultation meeting proposed giving an adjuvant treatment with imatinib [5].

The STER technique seems feasible in the rectum and helpful to facilitate complete R0 resection of rectal GISTs. This technique allows an interesting exposure of the GIST, particularly while making the muscular incision in the healthy margin.

Endoscopy_UCTN_Code_TTT_1AO_2AG

Competing interests

The authors declare that they have no conflict of interest.

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Endoscopy 2022; 54: E273–E274

DOI 10.1055/a-1508-5241

ISSN 0013-726X

published online 18.6.2021

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Georg Thieme Verlag KG, Rüdigerstraße 14,
70469 Stuttgart, Germany

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