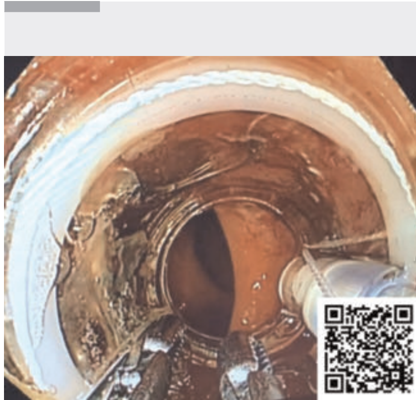
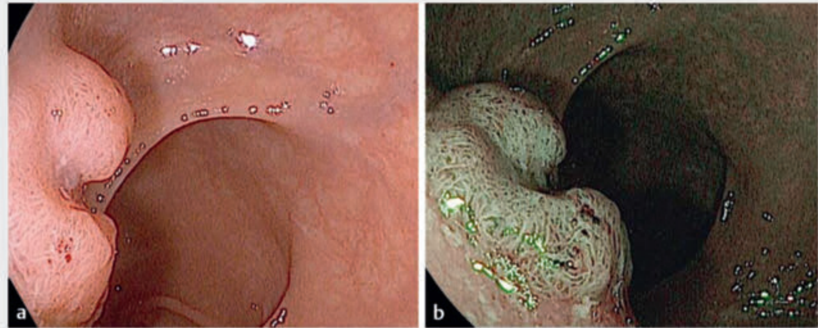
Dual-channel endoscope for double-traction endoscopic device-assisted full-thickness resection of rectal superficial tumor

OPEN ACCESS



Video 1 Double-traction endoscopic device-assisted full thickness resection.

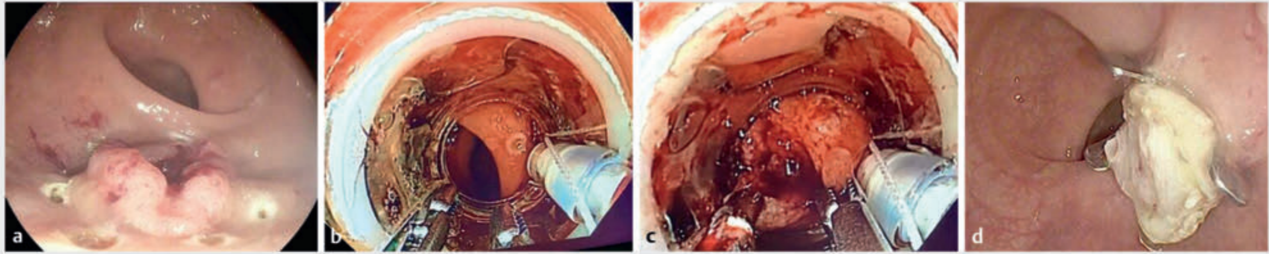


▶ **Fig. 1** Endoscopic evaluation of the rectal lesion revealed a 15-mm rectal nongranular laterally spreading tumor (LST-NG) with a pseudodepressed central area (0-IIa + 0-IIc according to the Paris Classification), characterized by pit pattern IV according to the Kudo Classification. **a** White-light endoscopy. **b** Virtual chromoendoscopy with I-SCAN technology (Pentax Medical, Tokyo, Japan).

Endoscopic device-assisted full-thickness resection (EDFTR) with over-the-scope clip deployment is a novel technique for treating complex colorectal polyps, specifically nonlifting adenomas (recurrent or previously biopsied/tattooed) or early carcinomas [1]. For these lesions, EDFTR has demonstrated a high technical success rate, and a good efficacy and safety profile [2, 3]. The technical success of EDFTR may be hindered by lesions with significant fibrosis that cannot be adequately lifted even when using dedicated grasping forceps [1, 4].

We recently managed a case involving a 74-year-old woman who was diagnosed, during a screening colonoscopy in another hospital, with a 15-mm-diameter rectal nongranular laterally spreading tumor (LST-NG). The lesion was extensively biopsied., Evaluation by digital chromoendoscopy (I-SCAN; Pentax Medical, Tokyo, Japan) revealed that the LST-NG had a pseudodepressed central area (0-IIa + 0-IIc according to the Paris Classification) with pit pattern IV, according

▶ **Fig. 2** Dual-channel therapeutic gastroscope for double-traction endoscopic device-assisted full-thickness resection. The severe fibrosis resulting from previous biopsies prevented complete traction of the lesion using standard methods. **a** To achieve complete traction of the lesion into the distal cap of the full-thickness resection device (Ovesco Endoscopy, Tübingen, Germany), a dual-channel therapeutic gastroscope was used (GIF-2TH180; Olympus, Tokyo, Japan). **b** The two operating channels were employed to use two foreign body forceps for lesion traction.



▶ **Fig. 3** Double-traction endoscopic device-assisted full-thickness resection. **a** The lesion was marked using a dedicated marking probe. **b** Two foreign body forceps were used, one in each of the two operating channels of the endoscope. **c** The forceps were used simultaneously to pull the entire lesion into the distal cap of the full-thickness resection device. **d** Following the release of the over-the-scope clip, the lesion was resected en bloc with the diathermic snare.

to the Kudo Classification (▶ **Fig. 1**). After a multidisciplinary discussion of all alternatives, EDFTR was proposed [5] (▶ **Video 1**).

Owing to the presence of severe fibrosis, adequate traction of the lesion could not be achieved either with suction or with a full-thickness resection device (FTRD; Ovesco Endoscopy, Tübingen, Germany) grasping forceps.

Subsequently, the FTRD was mounted onto a dual-channel (3.7 mm and 2.8 mm in size) therapeutic gastroscope (GIF-2TH180; Olympus, Tokyo, Japan) (▶ **Fig. 2**). First, the lesion was marked using a dedicated probe. To aid traction, two foreign body forceps (one for each operating channel) were simultaneously used to gently pull the lesion into the FTRD distal cap. Subsequently, an over-the-scope clip was released, and the lesion was resected "en bloc" by the FTRD diathermic snare. Finally, no residual tissue was seen on the resection base (▶ **Fig. 3**). No complications were recorded. The final histology showed a tubular adenoma with high grade dysplasia (R0 resection).

In expert hands, double traction through a dual-channel endoscope could represent an additional tool for the treatment of challenging fibrotic polyps by EDFTR.

Endoscopy_UCTN_Code_CPL_1AJ_2AD_3AF

Conflict of Interest

The authors declare that they have no conflict of interest.

The authors

Giuseppe Dell'Anna[1,2], Francesco Vito Mandarino[1,3], Paolo Biamonte[1,3], Francesca Bernardi[1,3], Vito Annese[2,3], Silvio Danese[1,3], Francesco Azzolini[1]

1 Gastroenterology and Gastrointestinal Endoscopy Unit, IRCCS San Raffaele Institute, Milan, Italy

2 Gastroenterology and Gastrointestinal Endoscopy Unit, IRCCS Policlinico San Donato, Milan, Italy

3 Vita-Salute San Raffaele University, Milan, Italy

Corresponding author

Giuseppe Dell'Anna, MD
Gastroenterology and Gastrointestinal Endoscopy Unit, IRCCS San Raffaele Hospital, Via Olgettina 60, 20132 Milan, Italy
dellanna.giuseppe@hsr.it

References

[1] Mueller J, Kuellmer A, Schiemer M et al. Current status of endoscopic full-thickness resection with the full-thickness resection device. Dig Endosc 2023; 35: 232–242

[2] Zwager LW, Bastiaansen BAJ, van der Spek BW et al. Endoscopic full-thickness resection of T1 colorectal cancers: a retrospective analysis from a multicenter Dutch eFTR registry. Endoscopy 2022; 54: 475–485

[3] Dolan RD, Bazarbashi AN, McCarty TR et al. Endoscopic full-thickness resection of colorectal lesions: a systematic review and meta-analysis. Gastrointest Endosc 2022; 95: 216–224. doi:10.1016/j.gie.2021.09.039

[4] ASGE Technology Committee. Aslanian HR, Sethi A et al. ASGE guideline for endoscopic full-thickness resection and submucosal tunnel endoscopic resection. VideoGIE 2019; 4: 343–350

[5] Pimentel-Nunes P, Libânio D, Bastiaansen BAJ et al. Endoscopic submucosal dissection for superficial gastrointestinal lesions: European Society of Gastrointestinal Endoscopy (ESGE) Guideline – update 2022. Endoscopy 2022; 54: 591–622. doi:10.1055/a-1811-7025

Bibliography

Endoscopy 2024; 56: E418–E419
DOI 10.1055/a-2316-3626
ISSN 0013-726X
© 2024. The Author(s).
This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited. (https://creativecommons.org/licenses/by/4.0/)
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany