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





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

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. 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).



▶ 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, lapan) (> 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 overthe-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.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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