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

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), characterized by pit pattern IV, according to the Kudo Classification.

▶ 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.

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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.

Conflict of Interest
The authors declare that they have no conflict of interest.

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References

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.