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Underwater endoscopic submucosal dissection of a relapsing neoplastic colorectal lesion after surgery and radiotherapy: water to the rescue!

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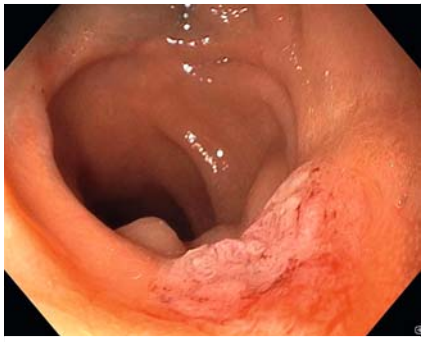
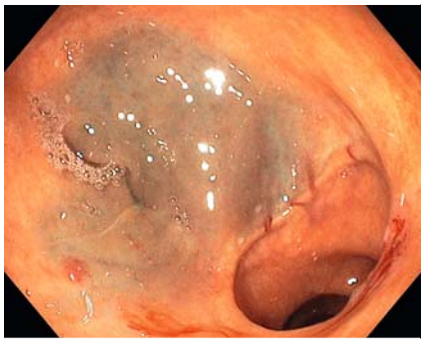
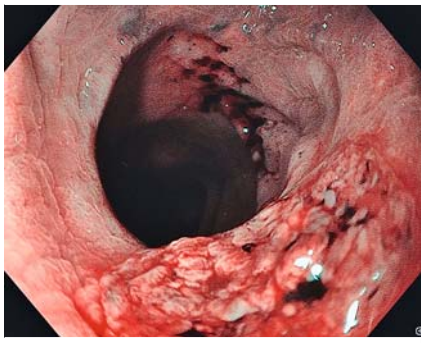


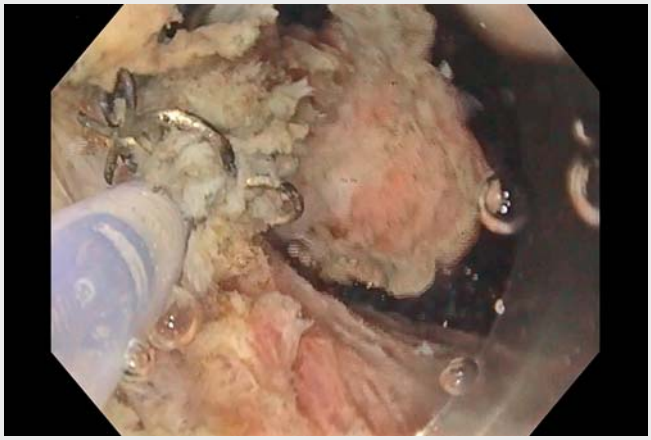
▶ **Fig. 1** Neoplastic superficial lesion of the nonpolypoid type, flat with a slight central depression (Paris 0-IIb + c) and 15 mm in length, located at the colorectal anastomosis.



▶ **Fig. 2** Colorectal anastomosis with previous tattoo and scarring from radiotherapy.



▶ **Fig. 3** No endoscopic signs of invasive cancer (vessel and surface pattern type 2B according to the classification of the Japan NBI Expert Team [JNET]).



Video 1 Underwater endoscopic submucosal dissection of a relapsing neoplastic superficial colorectal lesion after surgery and radiotherapy.

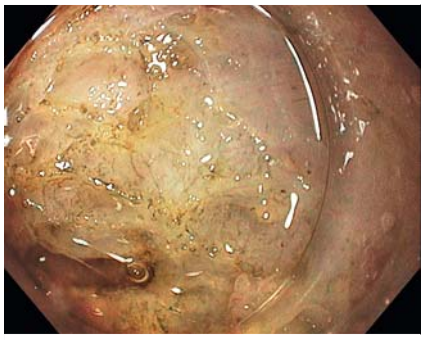
A 69-year-old woman with a history of rectosigmoid adenocarcinoma presented with tumoral relapse at the colorectal anastomosis 2 years after surgery. Chemoradiotherapy treatment and a watch-and-wait strategy were proposed. At 8 weeks after treatment there was a complete response, but 1 year later, a rectosigmoidoscopy identified a 15-mm relapsing nonprotruding lesion, flat, with a slight depression (Paris 0-IIb + c) (▶ **Fig. 1**, ▶ **Fig. 2**). Although friable, there were no unequivocal signs of deep invasion (▶ **Fig. 3**). The patient underwent endoscopic submucosal dissection (ESD), performed with FlushKnifeBT 1.5 mm (Fujifilm, Tokyo, Japan) (▶ **Video 1**).

The lesion did not lift satisfactorily with injection (Gelafundin [B Braun, Melsungen, Germany], indigo carmine, and adrenaline). ESD was extremely challenging, mostly due to the underlying fibrosis, which resulted in a complete loss of the submucosal plane, but also due to the lingering surgical material (▶ **Fig. 4**, ▶ **Fig. 5**).

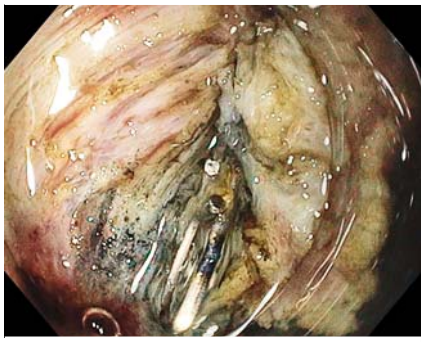
Despite the lesion having a favorable anti-gravity position, the dissection was unsuccessful. Therefore, the intestinal lumen was filled with water in order to perform underwater ESD (U-ESD), with complete submersion of the lesion. This technique facilitated the exposure of the submucosal plane and greatly improved visibility, allowing a safer and faster en bloc resection. Histopathology confirmed R0 resection of a tubulovillous adenoma with low grade dysplasia.

The safety and success of the underwater ESD technique have been recently reported [1–3]. During U-ESD, enhanced visualization of the submucosal space can be obtained due to the "buoyancy effect" [1, 2]. Furthermore, underwater resection may minimize thermal damage to the muscle layer, possibly decreasing the perforation rate [1, 3].

This case describes a demanding case of ESD of a relapsing neoplastic colorectal lesion located in a surgical anastomosis, in a site treated with radiotherapy. The



▶ **Fig. 4** Widespread and severe submucosal fibrosis during endoscopic submucosal dissection.



▶ **Fig. 5** In situ surgical material further complicating the procedure.

recently described U-ESD procedure was fundamental in achieving technical success and a curative resection. More evidence is needed before the routine use of U-ESD can be recommended [1].

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Competing interests

The authors declare that they have no conflict of interest.

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