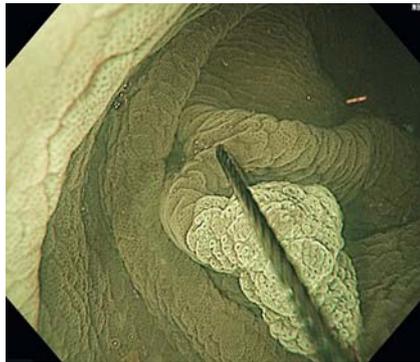


## Acetic acid-assisted underwater endoscopic mucosal resection for successful resection of sessile serrated lesions



► **Fig. 1** The margin of the sessile serrated lesion was delineated with acetic acid throughout the snaring process in case 1.



► **Fig. 2** The margin of the sessile serrated lesion was delineated with acetic acid throughout the snaring process in case 2.

Underwater endoscopic mucosal resection (UEMR) has become the new standard of endoscopic resection of  $\geq 10$ -mm non-pedunculated colonic polyps [1–4]. It is particularly difficult to delineate the margins of sessile serrated lesions (SSLs). Though submucosal injection of a blue-colored dye mixture (e. g., indigo carmine or methylene blue) is used to enhance these lesions, SSLs tend to expand owing to the injection of the dye. Hence, bigger snares are utilized or more pieces of resection are needed, resulting in bigger defects after removal or non-en bloc resection.

We present two endoscopic resection cases using a new acetic acid-assisted underwater technique for two SSLs. The

The effects of acetic acid persisted and were even clearer under the water.



► **Video 1** Two cases of colonic sessile serrated lesions treated with acetic acid-assisted underwater endoscopic mucosal resection.

lesions were both classified as Paris-IIa; they demonstrated Kudo type II open pits and were located in the right-side colon. The first and second lesions were 12 mm and 15 mm in diameter, respectively. In both cases, 10 mL of 1.5% acetic acid was applied over the lesion using a syringe. We confirmed the margin of the polyps easily by observing the acetowhitening reaction [5]. The lumen was then filled with saline using the water-jet function of the scope. In contrast to the approach using carbon dioxide, the persistent effect of acetic acid and the lack of mucus production were observed under the water. Thus, the margins of the lesions were clearly delineated throughout the snaring process (► **Fig. 1**, ► **Fig. 2**). Furthermore, the color change remained evident despite direct strong application of water onto the polyp. En bloc resection was achieved for both lesions. The persistence of the acetowhitening effect post-resection aided in ensuring no tissues from the lesion were left at the margin of the defect (► **Video 1**).

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### Competing interests

The authors declare that they have no conflict of interest.

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