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Cap-suction underwater endoscopic mucosal resection for en bloc resection of nongranular pseudodepressed colonic lesion: a novel technique when conventional snaring is not possible

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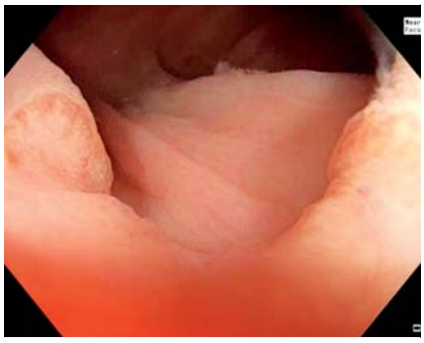
Colorectal lesions with a nongranular depressed component are difficult to snare and have a high risk of submucosal invasion; thus, en bloc resection of these lesions is mandatory, usually by endoscopic submucosal dissection (ESD) [1, 2].

Underwater endoscopic mucosal resection (UEMR), described by Binmoeller in 2012 [3], allows endoscopic resection without prior submucosal injection, as the colonic lesion "floats" in a lumen filled with water along with the mucosa and submucosa. Endoscopic ultrasound has shown that when the lumen is filled with water, the muscularis propria retains a circular configuration and does not follow the involutions of the mucosa and submucosa [3].

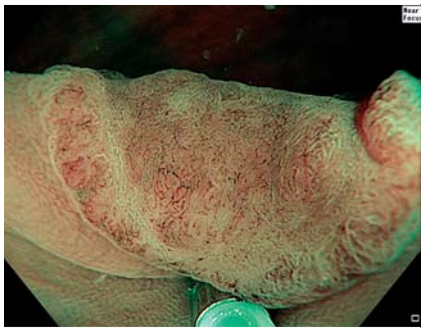
Cap-assisted EMR using a straight distal attachment has been described to resect polyps not easily amenable to standard EMR [4, 5].

Herein, we present the case of a 16 mm, nongranular, 0-IIa + IIc "u"-shaped lesion, which was partially hidden by a fold and difficult to face, located in the sigmoid colon (▶ **Fig. 1**, ▶ **Fig. 2**).

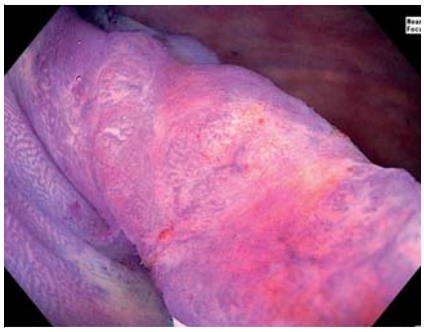


▶ **Fig. 1** Nongranular 0-IIa + IIc "u"-shaped lesion, which was difficult to face.

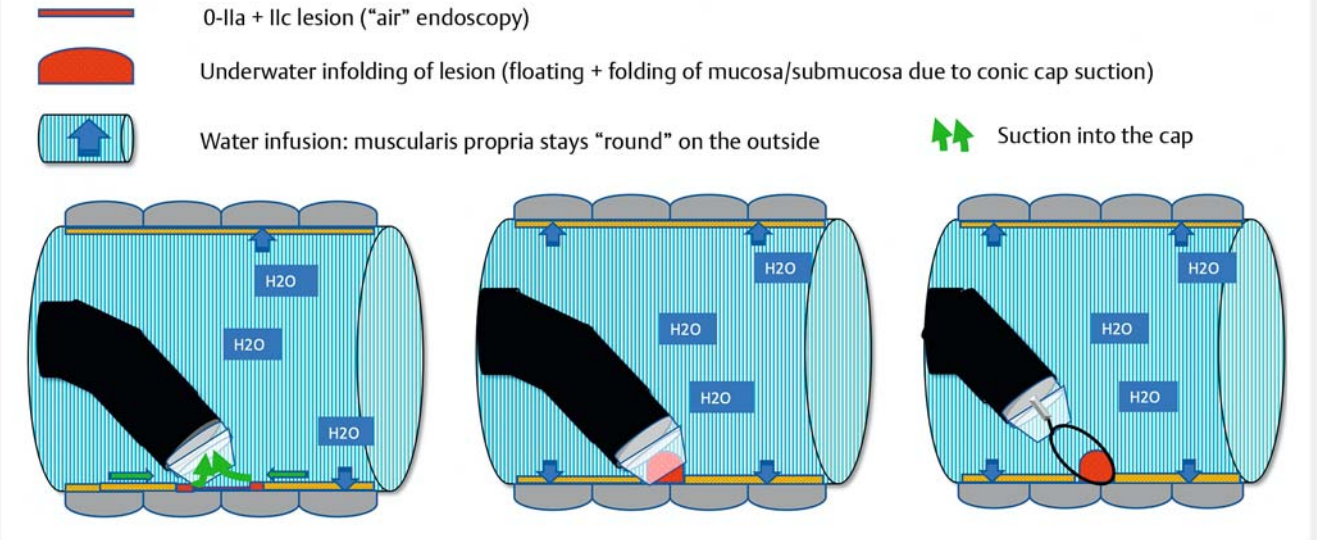
▶ **Fig. 2** Evaluation under white-light imaging.



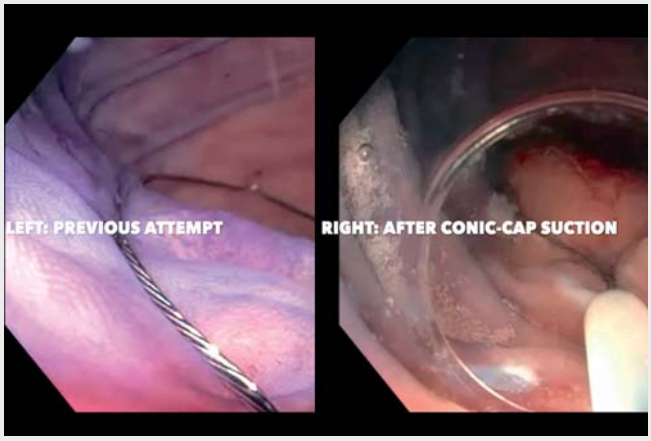
▶ **Fig. 3** Japan NBI Expert Team type 2b pattern under evaluation with narrow-band imaging and near focus.



▶ **Fig. 4** Pit pattern Vi (severe) under evaluation with crystal violet and near focus.



▶ **Fig. 5** Cap-suction underwater endoscopic mucosal resection.



Video 1 Cap-suction underwater endoscopic mucosal resection. **a** Previous attempt. **b** After conic-cap suction.

Evaluation under narrow-band imaging (NBI) with near focus showed Japan NBI Expert Team (JNET) type 2b (▶ **Fig. 3**) and chromoendoscopy showed pit pattern Vi severe-type (▶ **Fig. 4**).

En bloc "classic" UEMR was attempted but it was not possible to snare the lesion. Thereafter, with the lumen filled with water, a conic cap (ST hood DH-30CR; Fujifilm Europe, Düsseldorf, Germany) was used to gently aspirate the 0-IIc component, facilitating the infolding of the lesion into the gravity-free underwater environment; the lesion was then easily snared and resected by underwater EMR (▶ **Fig. 5**, ▶ **Video 1**).

As UEMR is a reversible technique because there is no injection and no deformity of the working space, we recommend trying this approach first for en bloc resection of nongranular 0-IIc lesions without overt features of malignancy, as it is a fast and cheap technique compared with ESD or endoscopic full-thickness resection. If classic UEMR does not seem feasible, conic cap aspiration before UEMR may be helpful for resection of flat depressed lesions.

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Competing Interest

The authors declare that they have no conflict of interest.

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