



## Underwater endoscopic mucosal resection of a rectal adenoma in the nondistensible rectum from severe fecal incontinence

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In a patient with severe fecal incontinence, polypectomy of rectal adenomas may be difficult if the patient cannot retain gas in the rectum. Existing literature does not include reports of the optimal polypectomy technique in these patients. We describe a challenging case of difficult polypectomy in the nondistensible rectum from severe fecal incontinence (Video 1, available online at [www.giejournal.org](http://www.giejournal.org)).

An 89-year-old woman with ischemic heart disease and hypertension underwent laparoscopic sigmoidectomy for stage II sigmoid cancer 1 year previously. There were no postoperative adverse events. However, she had fecal incontinence that worsened after colectomy. She could not hold gas and sometimes had leakage of liquid stool. Physical examination showed a loose anal sphincter with no sphincter defect.

We performed a surveillance colonoscopy. We used a magnifying colonoscope (CF-HQ290ZI; Olympus Medical Systems, Tokyo, Japan) and found a 10-mm sessile polyp at the upper rectum (Fig. 1). Magnifying narrow-band imaging showed a type 2B polyp of the Japanese NBI Expert Team classification (Fig. 2). At first, we tried to perform conventional EMR. After submucosal injection with indigo carmine mixed saline solution, it was still difficult to snare the polyp en bloc because of poor rectal distension. Occluding the anus with gauze did not help. We injected hyoscine butylbromide to

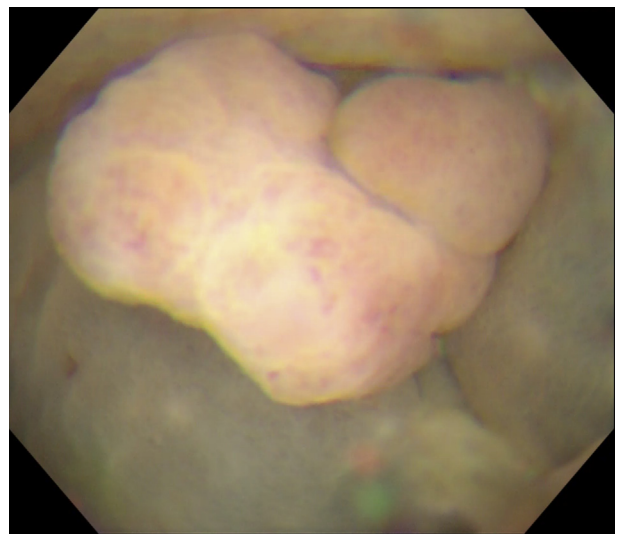
decrease peristalsis, but it was not helpful. Finally, we decided to perform underwater EMR. Water was infused until we achieved complete filling of the lumen. The patient's rectum was well distended with minimal anal leakage (Fig. 3). We achieved better exposure and performed successful



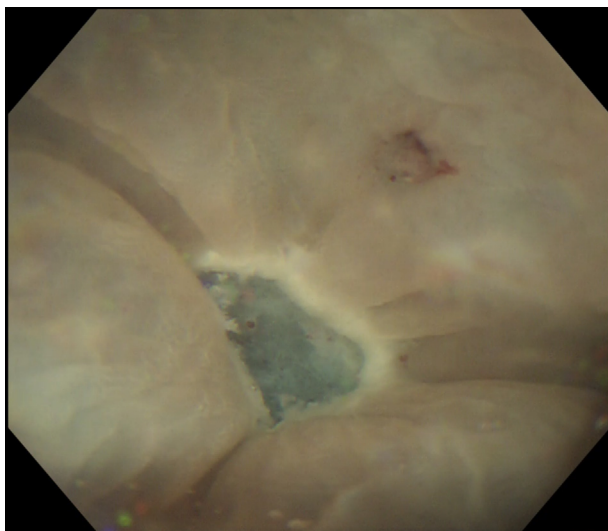
**Figure 2.** Magnifying narrow-band image showing a type 2B polyp of the Japanese NBI Expert Team classification.



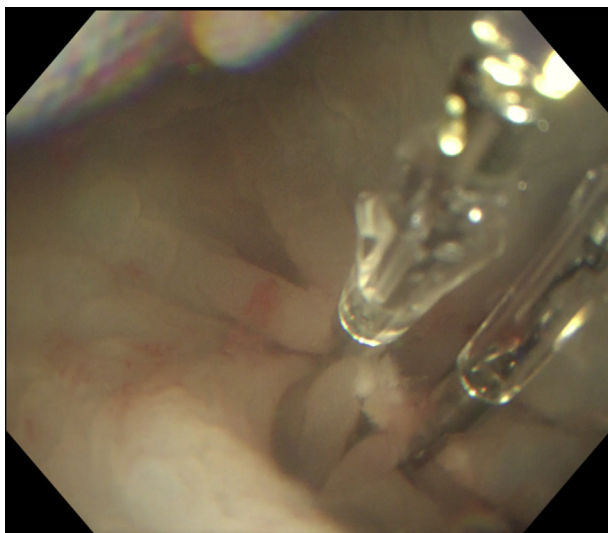
**Figure 1.** Endoscopic image showing a 10-mm sessile polyp in poorly distended upper rectum.



**Figure 3.** Endoscopic image after full water immersion. The rectum was well distended.



**Figure 4.** Endoscopic image showing completed underwater EMR.



**Figure 5.** Endoscopic image showing completed closure of the mucosal defect with endoscopic clips.

polypectomy using a SnareMaster (10 mm; Olympus Medical Systems) (Fig. 4). The mucosal defect was closed with endoscopic clips (Fig. 5). There were no adverse events. The pathology report revealed tubular adenoma with high-grade dysplasia with a clear resection margin.

Underwater EMR was first described by Binmoeller et al<sup>1</sup> in 2012. They reported a high rate of complete resection with minimal adverse events for large colorectal polyps. The rationale is that water immersion floats the mucosa and submucosa away from the deep muscularis layer. Therefore, safe polypectomy is achieved without the need for submucosal injection. We report another advantage of water immersion in a challenging case with severe fecal incontinence. Stool consistency has a crucial role in fecal incontinence. In theory, these patients find it easier to retain liquid than gas in the rectum.<sup>2</sup> For this reason, underwater EMR is suitable in this rare situation in which adenoma is located in the nondistensible rectum from severe fecal incontinence.

## DISCLOSURE

*All authors disclosed no financial relationships.*

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