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Underwater endoloop-assisted endoscopic resection for colorectal pedunculated polyps

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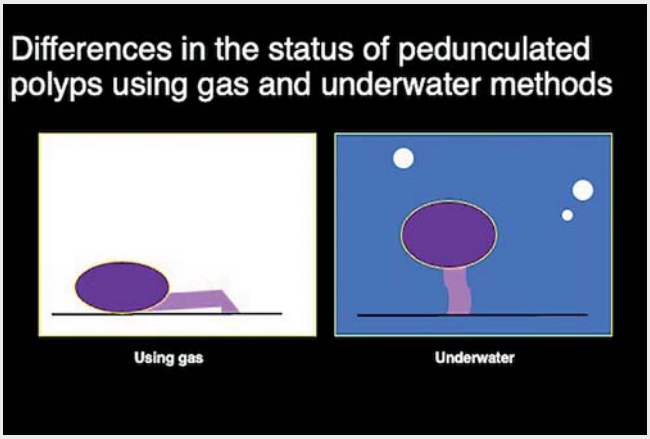
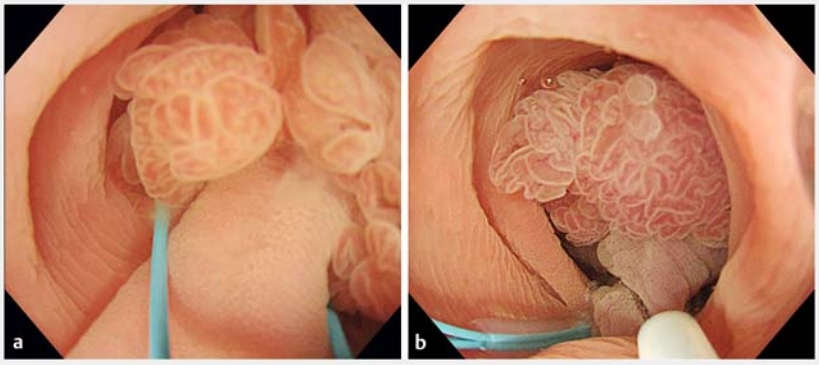
Detachable snares, such as endoloops, are effective for the removal of pedunculated colorectal polyps; however, they are often difficult to apply [1–3]. The underwater method and related techniques using instruments with waterjet functions are increasingly being developed and applied for the resection of colonic polyps [4, 5]. Here, we demonstrate the use of the underwater method to facilitate endoloop-assisted polypectomy in four patients with pedunculated colonic polyps (▶ **Video 1**).

The first case involved a 25-mm polyp with a thick stalk and a large villous head. First, we attempted to maneuver the endoloop in gas, but this was difficult because the loop clung to the rough surface of the polyp head. However, the head floated and its surface turned smooth in water, which allowed the endoloop to pass over it more easily (▶ **Fig. 1**). We also used the waterjet to assist in this process. En bloc resection was performed. The second polyp did not have a large head, but it was floppy. Therefore, a method similar to that used in case #1 was performed to remove the lesion (▶ **Fig. 2**).

In the third case, a large pedunculated lipoma was suspected in a patient with abdominal pain, and we believed that this lesion might have caused intermittent obstructive symptoms. The lesion had a very long stalk with a 25-mm head. As in the previous cases, manipulation of the endoloop around the head of the lesion, which was very floppy, did not result in adequate application of the endoloop. However, as expected, the lesion floated upon instillation of water to fill the lumen as fat has a lower density than water. The endoloop was then easily applied to the stalk base (▶ **Fig. 3**). In the case of the fourth polyp, we demonstrated that the snaring process was easier and more precise in water than in gas.



Video 1 Four cases of underwater endoloop-assisted snare resection for pedunculated polyps are shown.



▶ **Fig. 1** Endoscopic images showing: **a** underwater application of an endoloop around a pedunculated polyp; **b** subsequent underwater snaring of the polyp.

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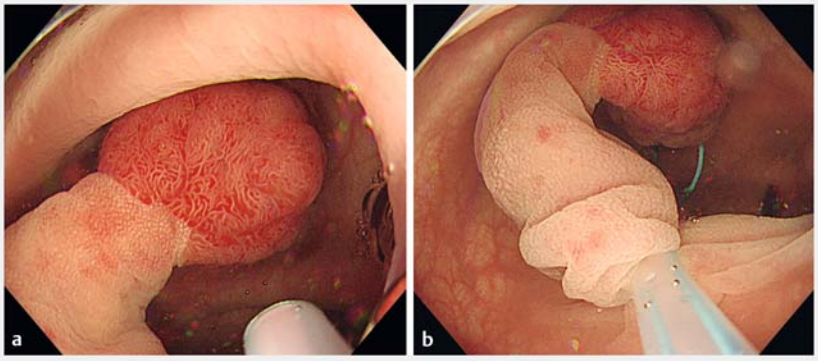
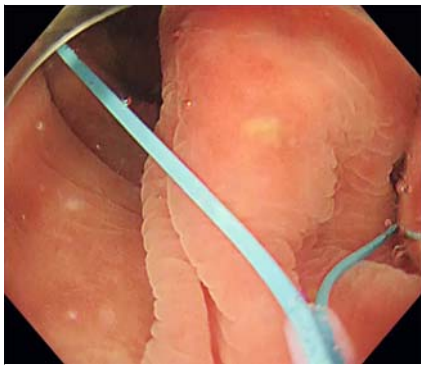


▶ **Fig. 2** Endoscopic images showing: **a** a pedunculated polyp that floated in water; **b** application of an endoloop, which was performed in water.



▶ **Fig. 3** Endoscopic image showing underwater application of an endoloop around a pedunculated lipoma.

Competing interests

The authors declare that they have no conflict of interest.

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