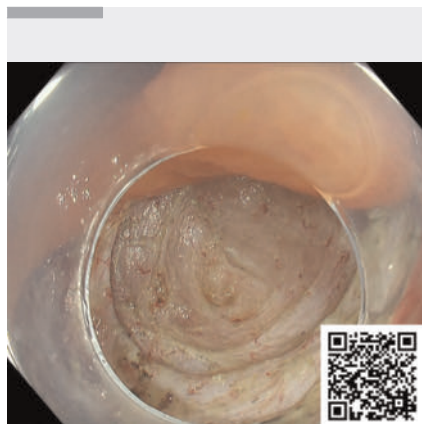
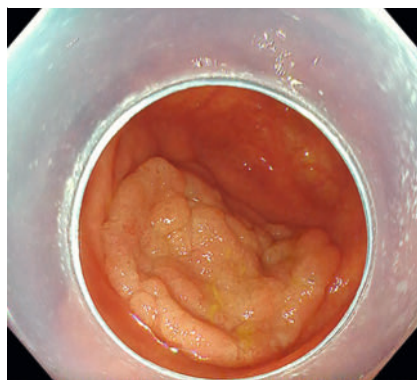


Endoscopic submucosal dissection for a large cecal adenoma covering an appendiceal orifice after appendectomy

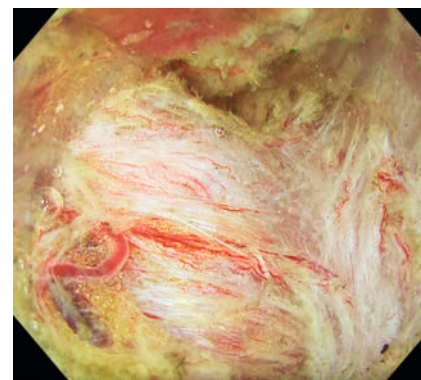


▶ **Video 1** Endoscopic submucosal dissection using the water pressure method for a large cecal adenoma covering the appendiceal orifice after appendectomy.

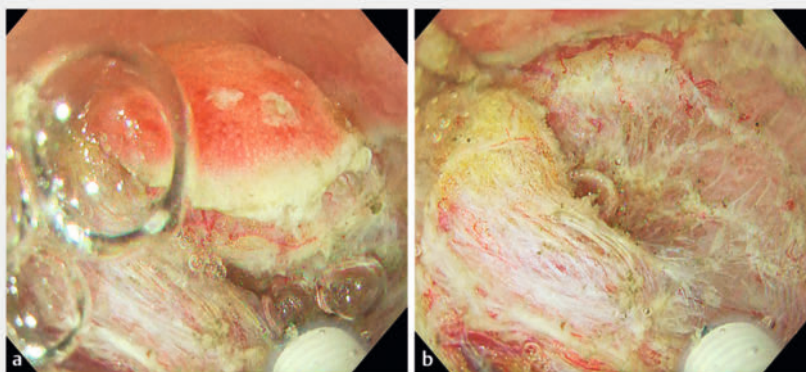
Endoscopic submucosal dissection (ESD) is recommended for colorectal tumors that cannot be completely removed by snare-based techniques. Endoscopic resection for appendiceal orifice lesions (Toyonaga's type 3: lesion entirely covers the orifice) is technically challenging because the appendiceal portion cannot be incised accurately [1]. Such lesions can be endoscopically removed if the patient has undergone an appendectomy, but submucosal fibrosis is a potential issue. Several reports have shown that ESD using a traction device or underwater strategies are useful for such lesions [2–4]. We demonstrate ESD for a lesion using the water pressure method (▶ **Video 1**), which is a technique that uses the waterjet function of an endoscope to secure the working space [5]. A 62-year-old woman, who had undergone appendectomy for acute appendicitis 45 years previously, was diagnosed with a 35-mm laterally spreading tumor in the cecum on colonoscopy (▶ **Fig. 1**). The scar of the appendiceal orifice could not be identified because the lesion was covering it. We performed ESD for the le-



▶ **Fig. 1** A 35-mm laterally spreading tumor covering the appendiceal orifice after appendectomy.

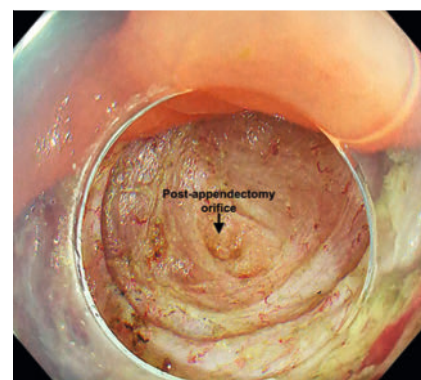


▶ **Fig. 2** Severe fibrosis was partly visible in the submucosa during submucosal dissection.



▶ **Fig. 3** The water pressure method. **a** Before water injection. **b** Just after water injection.

sion with a FlushKnife BT-S (1.5 mm, DK2620; Fujifilm Medical, Tokyo, Japan). A solution of sodium alginate was injected into the submucosa for thickening. The endoscope faced the lesion perpendicularly, and endoscope stability was poor due to respiratory fluctuations. To secure a stable field of view, the water pressure method was used while sucking air from the cecum. Severe fibrosis was partly visible in the submucosa during ESD (▶ **Fig. 2**). En bloc resection was achieved while maintaining a good visual field using the water pressure method (▶ **Fig. 3**, ▶ **Fig. 4**). The procedure was completed without any adverse events.



▶ **Fig. 4** The appendiceal orifice was identifiable in the resection wound.

The patient was discharged on post-operative day 4. Histopathological examination revealed a high grade tubulovillous adenoma with negative margins. A large cecal adenoma covering the appendiceal orifice after appendectomy could be removed by ESD with the water pressure method.

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Conflict of Interest

T. Kanesaka has received lecture honoraria from Olympus Corporation, AI Medical Service Inc., and AstraZeneca. R. Ishihara has received lecture honoraria from Olympus Corporation, FUJIFILM Medical Co., Ltd., Daiichi Sankyo Co., Ltd., Miyaras Pharmaceutical Co., Ltd., AI Medical Service Inc., AstraZeneca, MSD, and Ono Pharmaceutical Co., Ltd. Y. Asada, T. Michida, H. Satomi, and K. Honma declare that they have no conflict of interest.

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