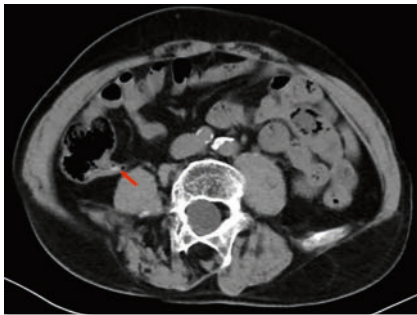


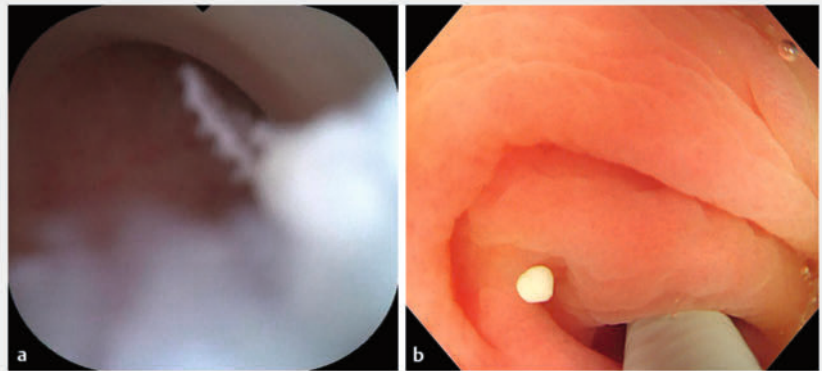
Visualization and biopsy of an appendiceal sessile serrated lesion during endoscopic retrograde appendicitis therapy

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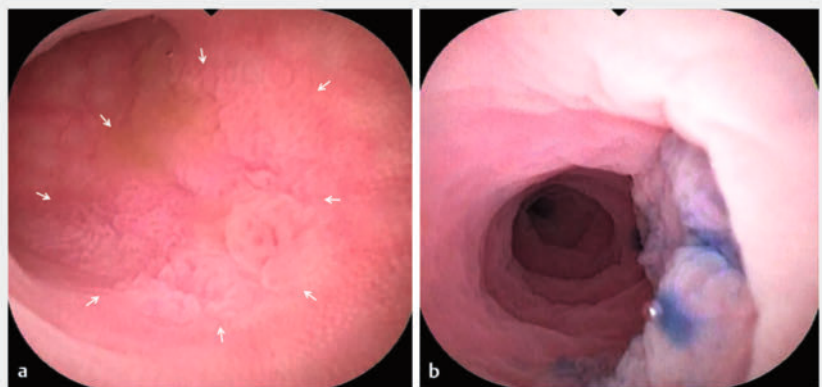


► **Fig. 1** The abdominal CT revealed appendicitis and appendiceal fecalith (the red arrow).

A 67-year-old man presented with pain and tenderness in the right lower quadrant. Abdominal computed tomography (CT) scan was performed, which revealed appendicitis and appendiceal fecaliths (► **Fig. 1**). The patient was admitted to our hospital for endoscopic retrograde appendicitis therapy (ERAT). The procedure was performed using a 3.2-mm biopsy channel colonoscope (CF-H290I; Olympus) with successful intubation of a single-use subscope (9-Fr eyeMax; Micro-Tech) into the appendiceal cavity. The subscope demonstrated that the cavity wall of the appendix lumen was slightly hyperemia and edema, and appendiceal fecaliths were found within the appendiceal lumen (► **Fig. 2 a**). Plenty of normal salines was used to rinse out the fecaliths (► **Fig. 2 b**). Subsequently, a 1.2-cm laterally spreading tumor was identified within the appendiceal lumen, characterized by a rough, granular mucosal surface covered by a mucous cap (► **Fig. 3 a**, ► **Video 1**). Methylene blue staining revealed a clear boundary (► **Fig. 3 b**). A biopsy was performed. The pathological findings of the biopsy were sessile serrated lesions (SSLs) (► **Fig. 4**). After obtaining informed consent, a laparoscopic appendectomy was performed. During the procedure, it was

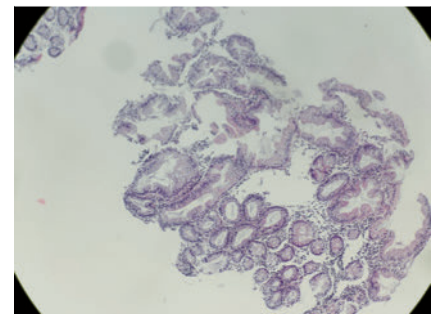


► **Fig. 2 a** The appendiceal fecaliths in the appendix lumen. **b** The appendiceal fecaliths were rinsed out.

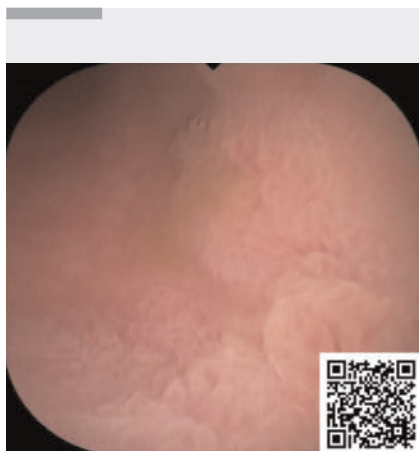


► **Fig. 3 a** The lesion was an area of rough, granular mucosa (the white arrow) in the appendix lumen. **b** Methylene blue staining showed a clear boundary.

observed that the appendix was elongated and exhibited mild adhesions to the surrounding tissues. The rough area in the appendiceal lumen was obvious at postoperative specimen (► **Fig. 5 a**). The presence of SSL with low-grade dysplasia was confirmed by the postoperative histopathological analysis (► **Fig. 5 b**). Postoperatively, the patient was given antibiotics therapy and fasted for 3 days. He recovered quickly from mild abdominal pain and was discharged 4 days later.



► **Fig. 4** Biopsy pathology of the lesion.



Video 1 The detection and biopsy of the lesion confined to the lumen of the appendix by the single-use subscope imaging system during endoscopic retrograde appendicitis therapy.

The symptoms of right lower quadrant pain and tenderness were significantly relieved.

Appendiceal SSLs are lesions with malignant potential, they are rarely reported and mainly incidental findings in appendectomy specimens [1,2]. This case demonstrates the utility of the single-use subscope imaging systems in managing appendicitis and detecting appendiceal lesions, providing clear visualization and enabling precise diagnosis and treatment. It provides a possible technique for the early detection and pathological diagnosis of lesions confined within the lumen of the appendix.

Endoscopy_UCTN_Code_CCL_1AD_2AB

Conflict of Interest

The authors declare that they have no conflict of interest.

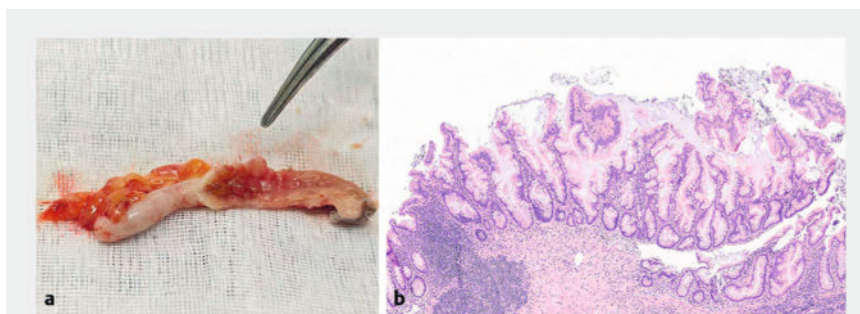


Fig. 5 **a** The rough area (the vascular clamp pointed) in the appendix lumen at the removed appendix. **b** Pathology of the lesion in the appendix lumen.

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