Appendiceal intussusception due to a fecalith mimicking a submucosal tumor

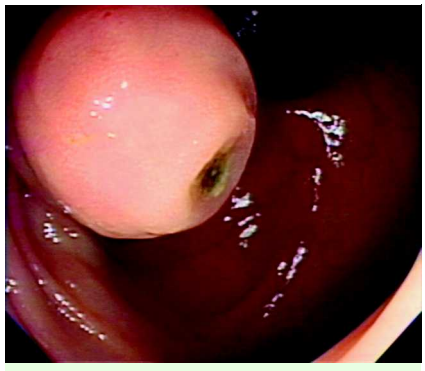

Fig. 1 Colonoscopic view showing a polypoid lesion protruding from the appendiceal orifice with a normal-appearing mucosa and a central dimple.

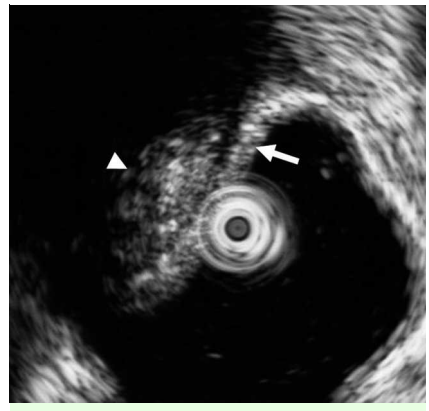

Fig. 3 Endoscopic ultrasound image showing a heterogeneous hyperechoic mass (arrowhead) within the partially invaginated appendiceal wall (arrow).

Fig. 2 Abdominal CT image showing a mixed-attenuation material with a high-attenuation component in the lumen of the appendiceal base (arrows).

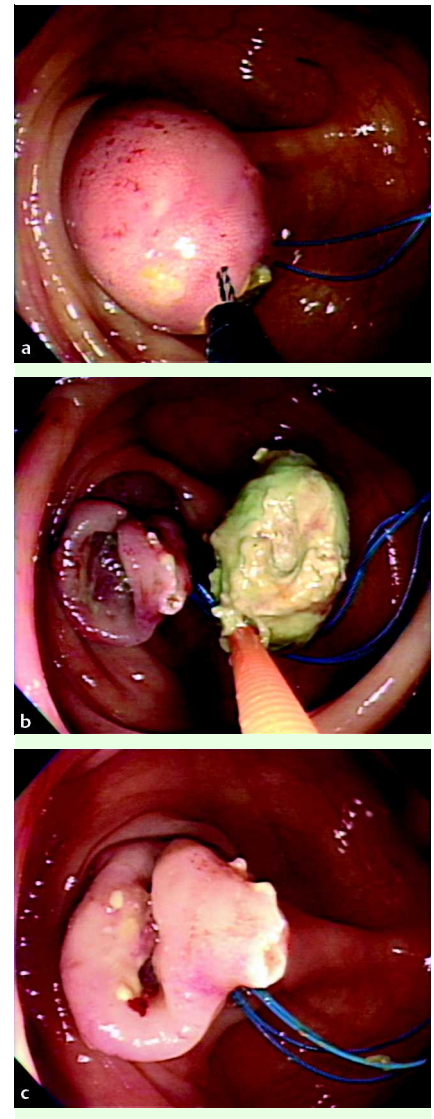

Fig. 4 Colonoscopic findings during the procedure. **a** The tumor base is ligated with an Endoloop. Note the fixed flexible knife. **b** After incision of the overlying mucosa, a fecalith is expelled from the lesion. **c** The invaginated appendiceal base is noted in the cecum.

A 44-year-old man underwent a colonoscopic examination for a health evaluation. He had no subjective symptoms. A colonoscopy revealed a polypoid lesion 2.0 cm in diameter at the site of the appendiceal orifice. This lesion had pink-colored, normal-appearing mucosa with a smooth surface and a 2-mm central dimple (**Fig. 1**). When pushed by a biopsy forceps, the lesion was found to have a hard consistency and could be partially reduced into the appendiceal base. On the basis of the colonoscopic finding, a presumptive diagnosis of a submucosal tumor arising from the appendix was made. An abdominal CT scan showed the presence of mixed-attenuation material with a high-attenuation component in the lumen of the appendiceal base (**Fig. 2**). Endoscopic ultrasonography demonstrated a heterogeneous hyperechoic mass with focal calcification and acoustic shadowing within the partially invaginated appendiceal wall (**Fig. 3**). We planned an endoscopic resection of the lesion for a histopathological diagnosis. Initially, the tumor base was ligated with an Endoloop (Olympus Optical Co., Ltd., Tokyo, Japan). After incision of the overlying mucosa with a fixed flexible knife, a 1.5-cm-sized, relatively hard, earthy-yellow-colored body of impacted material was expelled from the lesion (**Fig. 4a, b**). A histopathological examination confirmed the material as a fecalith. After endoscopic removal of a fecalith, the invaginated appendiceal base (intussusceptum) was clearly identified in the cecum (intussuscipiens) (**Fig. 4c**).

We presented a case of appendiceal intussusception due to a fecalith mimicking a submucosal tumor. Intussusception of the appendix is very rare and is difficult to diagnose preoperatively [1]. A reported incidence is 0.01 % of surgically removed appendices [1]. The essential mechanism of intussusception of the appendix is thought to be an abnormal peristalsis caused by local irritation, including irrita-

tion by a fecalith, foreign body, mucocele, endometriosis, or neoplasm [2, 3]. Appendiceal intussusception should be suspected when a dimpling submucosal tumor is noted at the appendiceal orifice.

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Bibliography
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