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Submucosal tumor-like protrusion - A case of terminal ileum diverticulum with incarcerated fecalith

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CASE REPORT

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A 43-year-old female presented with a four-day history of lower abdominal distention and pain. Colonoscopy revealed a 3 × 3 cm submucosal tumor-like spherical protrusion in the ileocecal region, prolapsed from the terminal ileum to the cecum, with a smooth surface mucosa (Fig. 1A). Endoscopic ultrasonography (EUS) and contrast-enhanced abdominal computed tomography (CT) were used to further characterize the lesion (Fig. 1B and C). To identify the nature of the lesion and remove it, endoscopic submucosal dissection (ESD) was performed under general anesthesia (Fig. 2A-E). After resection of the mucosa on the surface of the elevated lesion, a spherical fecalith measuring about 2.0 × 2.0 cm was found. After removal of the fecalith, the huge diverticulum was exposed. The patient received immediate postoperative management and monitoring, with no complications occurring during hospitalization. Follow-up colonoscopy performed nearly four months post-ESD demonstrated an uneventful recovery (Fig. 3). No adverse reactions were observed at the six-month follow-up.

DISCUSSION

Small intestinal diverticulum has a prevalence of 0.5-2.3 % in the population, and may lead to severe complications including obstruction, perforation, or abscess formation when inflamed (1). Diverticular fecalith impaction is a common cause of diverticulitis (2). Most are in the colon and usually have diverticular openings. Fecalith impaction in diverticulum covered by normal mucosa is rare, especially in the small intestine (3), which is easy to be misdiagnosed as tumors or other submucosal lesions (e.g., gastrointestinal stromal tumors, leiomyomas, lipomas). ESD enables the resection of submucosal intestinal lesions of undetermined nature. However, due to the complex anatomy of the small intestine (e.g., narrow lumen, thin wall), frequent peristalsis, and technical challenges of depth control during dissection, small intestinal ESD carries higher perforation and bleeding risks than gastric and colonic procedures. In this case, the fecalith was completely removed and the diverticulum was treated by ESD, which not only avoided the trauma of traditional surgery, but also preserved the integrity of the intestine, reflecting the minimally invasive advantages of endoscopic treatment.

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REFERENCES

1. Parfenov AI, Krums LM, Pavlov MV. Small intestinal diverticula. Ter Arkh 2019;91(2):4-8. DOI: 10.26442/00403660.2019.02.000080

2. Chen L, Wen CH, Zhang MQ. Analysis of 924 cases of colonic diverticulum diagnosed and treated by electronic en-terocopy. J Gastroenterol Hepatol 2023;32(8):862-5. DOI: 10.3969/j.issn.1006-5709.2023.08.005

3. Mansour M, Abboud Y, Bilal R, et al. Small bowel diverticula in elderly patients: a case report and review article. BMC Surg 2022;22(1):101. DOI: 10.1186/s12893-022-01541-y

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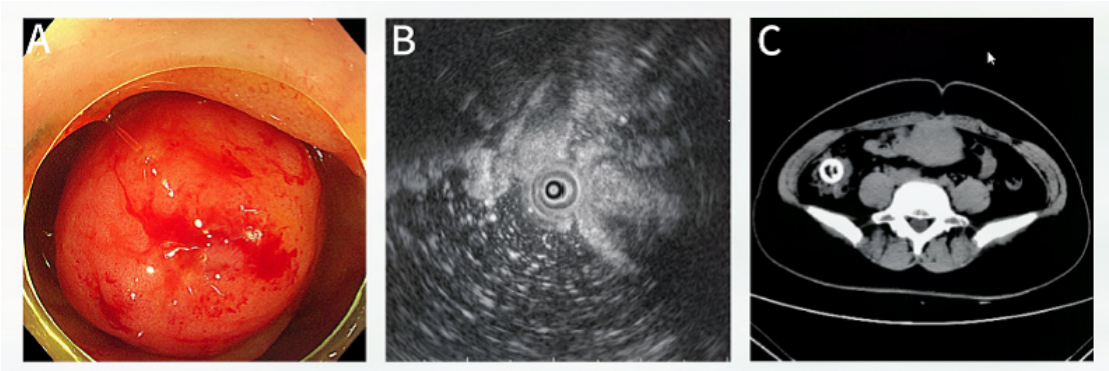

Fig. 1. A. Colonoscopy revealed a 3 × 3 cm submucosal tumor-like spherical protrusion in the ileocecal region, with a smooth surface mucosa. B. Endoscopic ultrasonography (EUS) showed mixed echoes in the lesion protrusion, and a 0.21 × 1.83 cm anechoic dark area in the center. C. Contrast-enhanced computed tomography (CT) of the abdomen showed a 2.5 cm non-enhancing ring calcification in the ileocecal region.

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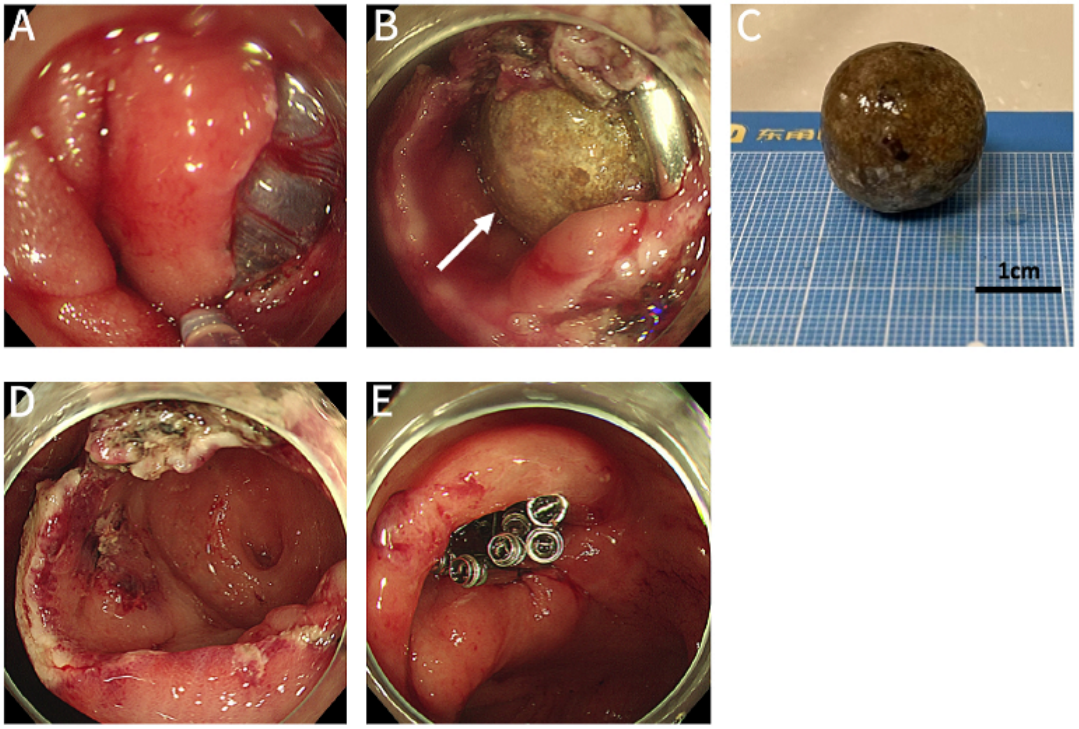

Fig. 2. A. After submucosal injection of the indigo carmine mixture, the mucosa was fully lifted. B. White arrow: after resection of the mucosa on the surface of the elevated lesion, a yellowish-brown spherical fecalith was found. C. The fecalith size was about 2.0 x 2.0 cm. D. A huge diverticulum was exposed after the fecalith was removed. E. Titanium clips were used to close the wound at the edge of the diverticulum to prevent delayed bleeding.

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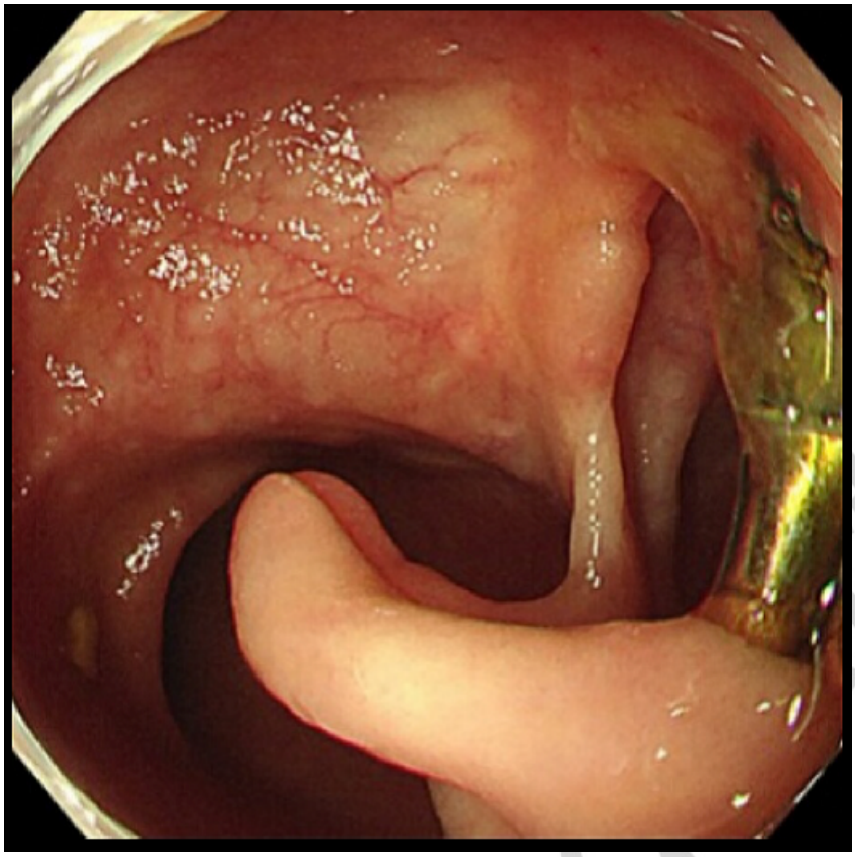

Fig. 3. Colonoscopy examination showed that the wound healed well, the wide mouth diverticulum in the terminal ileum existed, and the mucosa in the diverticulum was smooth.