

Case Report

Spontaneous Drainage of Appendiceal Abscess into the Cecum

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ABSTRACT

A 79-year-old man was referred to our hospital because of fecal occult blood and right lower abdominal quadrant pain for 10 days. A mass approximately 8 cm in diameter was palpable in the right lower quadrant of the abdomen, but rebound tenderness was absent. Laboratory examination revealed a white blood cell count of 12,500/ μ l and a serum C-reactive protein level of 1.7 mg/dl; results of all other blood tests, including examination of tumor markers, were unremarkable. Computed tomography (CT) demonstrated abscess formation in the right iliac fossa. Because the patient had taken aspirin orally for 5 years to treat angina pectoris, the initial treatment was conservative. Colonoscopy on the fifth hospital day revealed pus discharge through the appendiceal orifice, which was slightly swollen and reddish. However, endoscopic biopsy at the appendiceal orifice yielded no malignant cells. On the ninth hospital day, exploratory laparotomy did not reveal a mass lesion in the right iliac fossa which had been indicated with preoperative CT. The vermiform appendix was found to be shortened, and appendectomy was performed. The postoperative course was uneventful, and the patient was discharged on the eighth day after the operation. In this case, the appendiceal abscess visualized with preoperative CT had resolved by the time of surgery; the abscess is presumed to have drained spontaneously through the appendiceal orifice into the cecum.

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Key words : appendiceal abscess, spontaneous drainage, colonoscopy

INTRODUCTION

Appendectomy is the most common emergency surgical procedure worldwide, with appendicitis responsible for approximately 1 million hospital days annually¹. Fitz et al. first described and diagnosed appendicitis in 1886, and McBurney first performed appendectomy in 1894. Since then, appendectomy has been established as the standard treatment for appendicitis². Recently, however, for patients suspected of having appendicitis with abscess forma-

tion in the periappendix, conservative treatments, such as ultrasound-guided percutaneous drainage and antibiotic treatments, followed by interval appendectomy have been performed instead of traditional emergency surgery³⁻⁵. Furthermore, after successful conservative treatment, interval appendectomy is not always necessary⁶⁻⁹. In such patients who have not undergone ultrasound-guided percutaneous drainage, where did the abscess drain? Herein we report on a patient in whom an abscess was observed with colonoscopy to have drained spontaneously into the

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CASE REPORT

A 79-year-old man was referred to our hospital because of fecal occult blood and right lower quadrant abdominal pain for 10 days. A mass approximately 8 cm in diameter was palpable in the right lower quadrant, but rebound tenderness was absent. Ultrasonography demonstrated a periappendiceal abscess (Fig. 1). Laboratory examination

revealed a white blood cell count of $12,500/\mu\text{l}$ and a C-reactive protein level of 1.7 mg/dl ; results of all other blood tests, including examination of tumor markers, were unremarkable. Computed tomography (CT) showed an abscess in the right iliac fossa (Fig. 2). Because the patient had taken aspirin orally for 5 years to treat angina pectoris, the initial treatment was conservative. On the fifth hospital day, colonoscopy revealed pus discharge through the appendiceal orifice, which was slightly swollen and reddish (Fig. 3). Endoscopic biopsy at the appendiceal orifice yielded no malignant cells. On the ninth hospital day exploratory laparotomy was performed when the mass lesion detected with preoperative CT in the right lower quadrant was no longer palpable. The vermiform appendix was

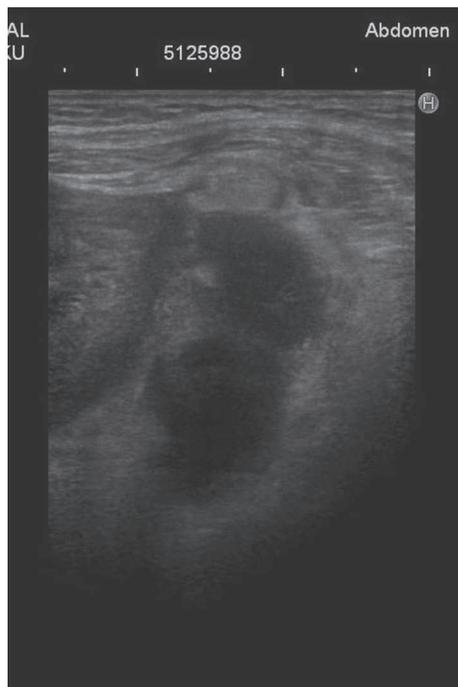


Fig. 1. Preoperative ultrasonography. An abscess was identified in the periappendiceal area.

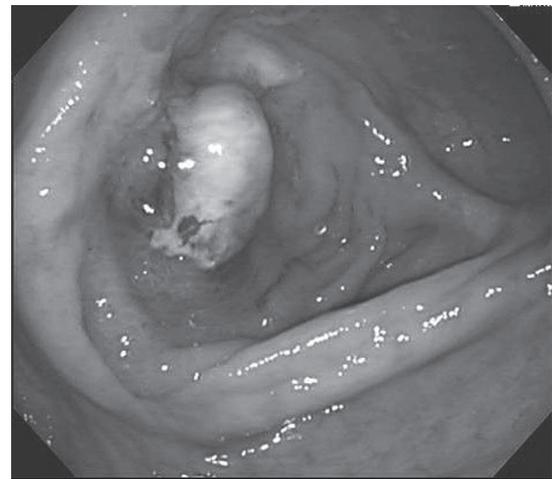


Fig. 3. Preoperative colonoscopy. Spontaneous pus drainage was identified from the orifice of the vermiform appendix into the cecum.



Fig. 2. Preoperative computed tomography. A cystic and mass lesion suggestive of an abscess was detected in the right iliac fossa (arrows).

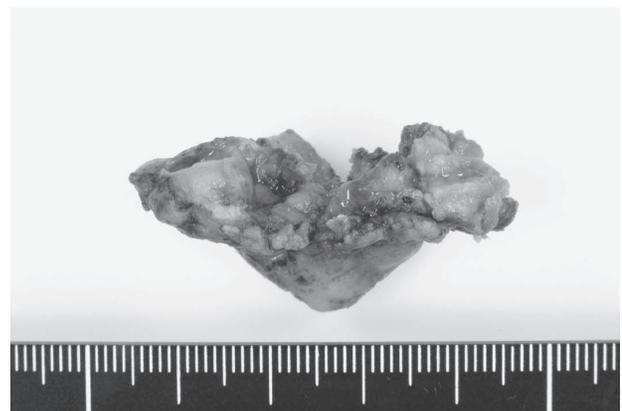


Fig. 4. Surgical specimen. The vermiform appendix measured $4 \times 1.2 \text{ cm}$, and no malignant cells were detected.

found to be shortened, and appendectomy was performed (Fig. 4). Histologic examination of the resected appendix showed inflammatory cell infiltration, consisting predominantly of lymphocytes and plasma cells, as well as edema and fibrosis in its wall but no malignant cells. The appendiceal abscess that had been visualized with preoperative CT had already resolved by the time of surgery. The postoperative course was uneventful, and the patient was discharged 8 days after the operation.

DISCUSSION

Periappendiceal abscess formation is present in 2% to 7% of cases of acute appendicitis. When emergency surgery is performed for patients with acute appendicitis and periappendiceal abscesses, the complications rate is as high as 26%^{9,10}. In emergency surgeries, the approach to the appendix is difficult because inflamed tissues, and ileocecal resection or right colectomy would be required instead of simple appendectomy. Therefore, the favored initial treatment for patients suspected of having appendicitis with periappendiceal abscess formation has recently become conservative treatment instead of emergency surgery. In addition, after successful conservative treatment, an interval appendectomy is not always necessary. The recurrence rate is low, approximately 7%⁶⁻⁹. In these cases, where does the abscess drain ?

Some reports have described drainage of a pericecal abscess into the cecum through the hole made at endoscopic biopsy, after which all patients showed clinical improvement¹¹. In the present case, the appendiceal abscess that we had confirmed with preoperative CT had already resolved by the time of surgery. The discharge of pus through the appendiceal orifice identified with colonoscopy on the fifth hospital day seems to verify that the periappendiceal abscess drained spontaneously through the appendiceal orifice into the cecum. In the present case, interval appendectomy might not have been necessary. The efficacy of conservative treatment for acute appendicitis associated with periappendiceal abscess may depend on the drainage function of the appendiceal orifice.

Much controversy remains regarding whether interval appendectomy is appropriate for adults with an appendiceal mass or abscess. The real concern is whether leaving the appendix in situ will prevent the detection of a cecal carcinoma or an ileal or appendicular malignancy¹².

In a series of 38 interval appendectomies, histological examination revealed 1 adenocarcinoma¹³. The finding of a meta-analysis that nonsurgical treatment is associated with a risk of missing or delaying a diagnosis of an underlying cancer or Crohn's disease in about 2% of the patients, however, justifies follow-up with a colon examination, CT, or ultrasonography, especially in patients older than 40 years¹⁴.

Laparoscopic interval appendectomy may decrease complication rates and shorten hospital stays. A prospective study of open and laparoscopic appendectomy for acute appendicitis showed a significantly lower wound infection rate in patients undergoing laparoscopic surgery¹⁵. Technically advanced surgeons have performed single-incision laparoscopic surgery (SILS) for acute appendicitis¹⁶⁻¹⁸. SILS appendectomy is both feasible and safe for patients with complicated appendicitis ; however, SILS appendectomy is associated with more postoperative pain than is conventional laparoscopic surgery¹⁹.

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