Case Report

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Cecal amebiasis mimicking inflammatory bowel disease

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Abstract

Amebiasis is a frequently occurring parasitic infection in South East Asia. We present a case of a 54-year-old man with right lower quadrant abdominal pain that persisted for longer than 1 year. He had been diagnosed with inflammatory bowel disease in Indonesia. His abdominal pain persisted, despite therapy, and he visited Malaysia for transnational medical advice. Abdominal ultrasound showed fatty liver, gallbladder polyps, and a small left renal stone. Colonoscopy showed multiple ulcers in the cecum and a histopathological examination confirmed amebic infection of the cecum. The colonic ulcers subsided after anti-amebic treatment. This case highlights the need to consider the differential diagnosis of amebic colitis in patients presenting with manifestations of inflammatory bowel disease, especially in patients who live in or have traveled to endemic areas.

Keywords

Amebic infection, cecal ulcer, inflammatory bowel disease, abdominal pain, intestinal amebiasis, parasite

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Introduction

Amebiasis is a concerning parasitic infectious disease in South East Asia. Amebiasis occurs globally, but most infectious cases are found in developing countries.[1] The prevalence of ameba is approximately 18% among the most prevalent parasites in the eastern part of Indonesia.[2] This infection is transmitted via the oral–fecal route through ingestion of cysts of *Entamoeba histolytica*.[3]

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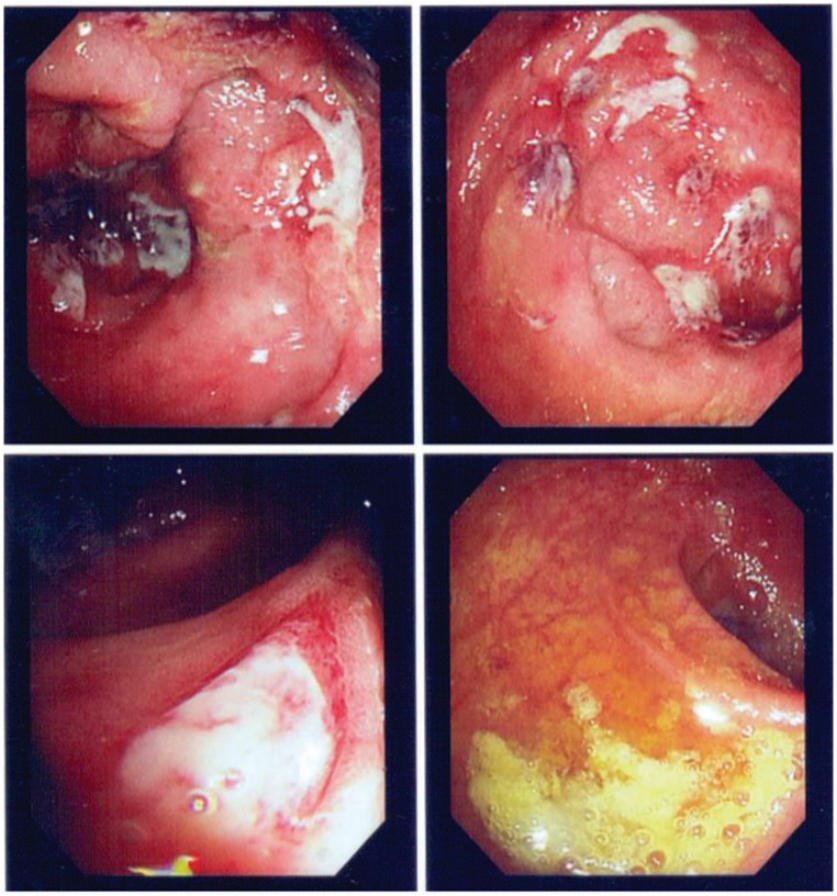

Figure 1. Colonoscopy shows multiple ulcers in the cecum.

The clinical manifestations of amebiasis range from asymptomatic to severe.[4] We present here a case of a patient with cecal ulcers mimicking inflammatory bowel disease who visited Malaysia for transnational medical advice.

Case report

A 54-year-old Indonesian man with right quadrant abdominal pain persisting for more than 1 year visited Malaysia for transnational medical advice. He was diagnosed with inflammatory bowel disease in Indonesia after a colonoscopic examination in Indonesia. However, the patient did not know whether his disease was Crohn's disease or ulcerative colitis, and he received the medication mesalazine accordingly. No diarrhea, body weight loss, bloody stool, vomiting, or fever was noted. He appeared comfortable throughout an examination. His blood pressure was 125/60 mmHg and he did not show tachycardia. He showed mild tenderness in the right lower quadrant area without rebound tenderness. An abdominal ultrasound scan showed fatty liver, gallbladder polyps, and a small left renal stone. No other laboratory testing was performed. Colonoscopy showed multiple ulcers in the cecum and a normal terminal ileum (Figure 1). Biopsy was performed, and a

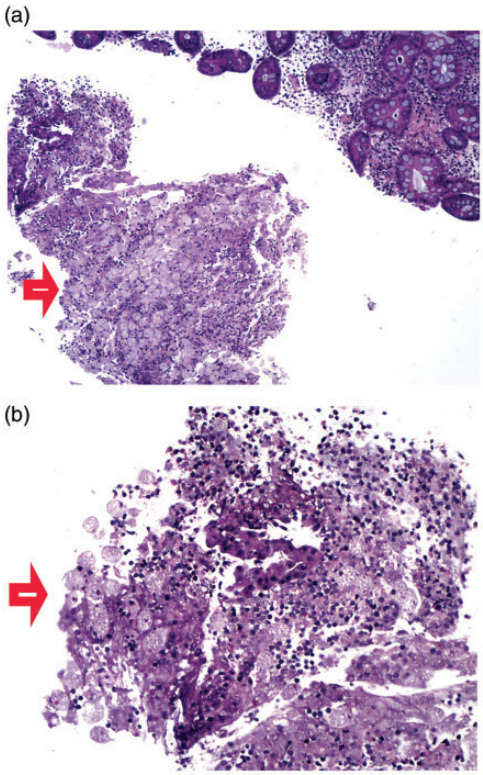

Figure 2. (a, b) Histopathological results. The arrow indicates an ameba.

histopathological examination showed fragments of cecal mucosa with foci of tissue degeneration and ulceration. The degenerated tissue areas were infiltrated and mixed with inflammatory exudates, and some areas showed neutrophilic infiltration, which caused microabscesses. Residual colonic mucosa showed mainly regularly spaced glands. A few clusters of microorganisms were observed using periodic acid–Schiff staining. Special stains for fungi and acid-fast bacilli were negative. The histopathological results were consistent with amebic colitis. (Figure 2a, 2b). The abdominal pain resolved after taking metronidazole 750 mg three times a day for 10 days and paromomycin 500 mg three times a day for 10 days. Repeated colonoscopy 1 year later showed total healing of the ulcers.

The CARE guidelines were followed. Ethics committee approval was not required because we presented only one case of a rare condition. The patient provided informed consent for publication of the case and we have also de-identified the details.

Discussion

Amebiasis is a frequently occurring parasitic infection in tropical countries, it is caused by *E. histolytica*, and it is one of the five most prevalent parasites in Indonesia.[1,2] This parasite infects humans via the oral–fecal route through ingestion of cysts.[3] Most of these patients are asymptomatic, but they may present with intestinal amebiasis or extraintestinal disease.[3] Intestinal amebiasis refers to the presence of ameba

in the intestine. This includes asymptomatic carriage or symptomatic amebic colitis, amebic colitis, severe invasive amebic colitis, and ameboma, and the cecum is the major site of infection.[3,5,6] The mortality rate of amebiasis is high when complications occur, such as acute necrotizing colitis, toxic megacolon, perforation, and peritonitis,[7] and surgical intervention may be required. Most cases of extraintestinal amebiasis involve the liver, show amebic liver abscesses, and require antibiotic treatment or drainage.[8] Even in cases of asymptomatic infection, treatment is recommended to prevent worsening of this disease to an invasive condition.[4] Symptomatic disease should be treated with a tissue active agent followed by an agent, such as paromomycin, while asymptomatic carriage only needs be treated with paromomycin.

Colonoscopy is a good option for diagnosing invasive amebic colitis, and invasive protozoa can be found on microscopic examination of colonic ulcers,[9] as observed in our case. However, colonoscopy is not always indicated for diagnosis of invasive amebic colitis. There are several non-invasive methods for diagnosis of amebic colitis that should be discussed, especially in resource-limited settings, when patients may not be able to access specialty care or afford endoscopy. According to Singh et al.,[10] colonic amebiasis should be suspected if the colon shows discrete mucosal ulcers with intervening normal mucosa, whereas inflammatory bowel disease should be considered if the ulcers present with mucosal changes. However, distinguishing amebic colitis from inflammatory bowel disease by endoscopic appearance of ulcers alone may not always be possible. Biopsy samples should be obtained from blood clots lining ulcers where trophozoites are present.[10,11] In patients with presumed inflammatory bowel disease, three stool samples should be collected on alternate days to exclude the diagnosis of parasitic diseases, especially that of amebiasis.[5] However, stool microscopy is the least sensitive and specific of all diagnostic modalities for amebiasis, and should only be used for diagnosis when more sensitive modalities, such as polymerase chain reaction and fecal antigen detection tests, are unavailable. Treatment of inflammatory bowel disease involves steroids and other immunosuppressive agents. However, administration of steroids to patients with amebiasis can lead to fulminant and even fatal outcomes.[12]

Ingestion of infectious cysts of *E. histolytica* is the only transmission mode for amebic infection. Cysts can survive in the environment for many weeks. Infection is most commonly associated with contaminated hands, food, or water. Provision of safe food and clean water is the most important approach to prevent amebic infection.[4] Improvement of sanitation is considered the only way to prevent amebiasis, and there is no vaccine available for this condition.[1] Transmission of *E. histolytica* generally occurs by fecal excretion of cysts followed by oral ingestion of contaminated food or water. Amebiasis is increasingly recognized by sexual transmission, especially among men who have sex with men, because it is transmitted by fecal excretion of the *E. histolytica*.[13]

Malaysia has been focusing on the medical tourism industry because foreigners visit Malaysia for further medical treatment. Visitors are mainly from countries in South East Asia, especially Indonesia. Amebic colitis should be considered in the differential diagnosis of colon ulcers associated with abdominal pain in patients from tropical countries or in those with a travel history to tropical countries who visit Malaysia for medical advice.

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Declaration of conflicting interest

The authors declare that there is no conflict of interest.

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