Acute Fulminant Necrotizing Colitis Caused by Amebiasis: Report of a Case

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Abstract
Fulminating colitis rarely develops as a complication of amebiasis; however, it is difficult to diagnose and treat, and associated with a very high mortality rate. We report herein the case of a 62-year-old man with superacute fulminant necrotizing amebic colitis who, despite treatment with aggressive surgery and antiamebic agents, died of multiple organ failure following sepsis on the 25th day after onset. The patient had no immunosuppressive disorders and claimed that he had never had homosexual intercourse, or traveled to the tropics in recent years. Since the incidence of amebiasis is increasing in developed countries, including Japan, more attention should be focused on the fulminating nature of this disease.

Key words Amebic colitis · Necrotizing colitis · Panperitonitis · Surgical treatment · Metronidazole

Introduction
Amebiasis can be an acute or chronic disease, produced by Entamoeba histolytica. It is well known to be endemic in many tropical and subtropical areas of the world, however, the incidence of invasive amebiasis is also increasing in developed countries, especially in homosexual men and travelers from the tropics. Invasive amebiasis is usually a mild disease, but occasionally it manifests in a fulminating form, characterized by severe bloody diarrhea, often with mucosal slough, extreme toxemia with pyemia, leukocytosis, and signs of peritonitis. While sporadic cases of fulminant necrotizing amebic colitis are very uncommon, there have been reports even in developed countries, including Japan.

Radical surgery consisting of prompt total colectomy with ileostomy has been advocated for patients with extensive lesions involving large segments of the colon, considering the poor results reported for conservative treatment. However, many workers have emphasized the difficulties in diagnosing and treating this disease and its very high mortality rate of 70%–100%.

This report describes a patient with a superacute form of fulminant necrotizing amebic colitis who was treated by aggressive surgery, an anti-amebic agent, and intensive care, despite which he died of sepsis followed by multiple organ failure. This case is reported to draw attention to the possibility of encountering this fulminating disease which has an extremely high mortality rate.

Case Report
A 62-year-old Japanese man was admitted to a local hospital on April 20, 2001, after the sudden development of abdominal pain and a fever of up to 39.0°C. His general health had been excellent and he had not suffered any previous episodes of diarrhea. He stated that he had not traveled to the tropics, although he had visited Hong Kong once 15 years earlier, and he denied homosexuality. Treatment with intravenous antibiotic injections did not relieve his symptoms, and he was transferred to our hospital under a provisional diagnosis of acute appendicitis on April 23, 2001.

On admission to our hospital, he had a fever of 39.5°C and complained of severe right lower quadrant abdominal pain. The laboratory data indicated inflammatory status with a white blood cell count of 20000/µl and a C-reactive protein level of 10.5mg/dl, but no other abnormal findings. The antibodies for the human immunodeficiency virus (HIV) and human adult T-cell
leukemia virus were negative, as were the *Treponema pallidum* hemagglutination test, and the hepatitis B virus surface antigen and hepatitis C virus antibody. His abdomen was slightly distended, and he had localized muscular defense with severe tenderness and an inflammatory mass in the right lower quadrant. A computed tomography scan revealed a large swelling of the appendix with a fluid collection (Fig. 1a). An emergency operation was performed for a presumed diagnosis of a perforating appendicitis with localized peritonitis, and the purulent appendix and cecum were resected, followed by the insertion of multiple intra-abdominal drainage tubes. At the time of laparotomy, although there were inflammatory changes and pus around the appendix and cecum, these findings were considered to be compatible with those of perforating appendicitis with localized peritonitis. However, his condition failed to improve after the operation. His abdomen was still distended with involuntary guarding, and his laboratory data indicated a continuous inflammatory response (Fig. 2). On the second hospital day, his stools contained blood; however, an assay for *Clostridium difficile* toxin in the stool was negative. A colonoscopy was performed, but the proximal large intestine from the middle sigmoid colon could not be visualized because of severe abdominal pain. The rectum and lower sigmoid colon appeared to have no abnormal lesions, and no bloody stools were seen during the colonoscopy.

On the sixth hospital day, a second emergency laparotomy was performed because his clinical condition had deteriorated, with signs of acute abdomen caused by panperitonitis (Fig. 1b). At laparotomy, a small quantity of purulent fluid was found in the abdominal cavity, and multiple inflammatory areas were identified throughout the necrotizing surface of the large intestine (Fig. 3) involving the ascending, transverse, descending,