

SHORT REPORT: AMEBIC COLITIS IN ASYMPTOMATIC SUBJECTS WITH POSITIVE FECAL OCCULT BLOOD TEST RESULTS: CLINICAL FEATURES DIFFERENT FROM SYMPTOMATIC CASES

MAKOTO OKAMOTO,* TAKAO KAWABE, KEN OHATA, GOUICHI TOGO, TETSUYA HADA, TETSUROU KATAMOTO, MASATAKA TANNO, MASAYUKI MATSUMURA, YUTAKA YAMAJI, HIROTSUGU WATABE, TSUNEO IKENOUE, HARUHIKO YOSHIDA, AND MASAO OMATA

Department of Gastroenterology, University of Tokyo, Tokyo, Japan; Department of Gastroenterology and Department of Pathology JR Tokyo General Hospital, Tokyo, Japan; Department of Gastroenterology, Institute for Adult Diseases, Asahi Life Foundation, Tokyo, Japan

Abstract. Amebiasis is a common parasitic infectious disease in developing countries. In developed countries, it is occasionally encountered in travelers to the tropics and in homosexual males. During the past eight years, we detected four cases of amebic colitis among 5,193 subjects who underwent colonoscopy because of positive fecal occult blood test results in a mass screening. All four cases did not have any abdominal symptoms. Ulcerative lesions were observed only in the cecum and ascending colon; another portion of the colon and rectum appeared normal. We may encounter amebic colitis during colonoscopic examination even in subjects who are asymptomatic.

Amebiasis, which is caused by the intestinal protozoan parasite *Entamoeba histolytica*, is the second leading parasitic cause of death worldwide. This parasite is responsible for 40 million infections and 100,000 deaths annually.^{1,2} Amebiasis is most prevalent in developing countries in the tropics. However, in industrialized countries, it has been increasingly observed in travelers to the tropics and in homosexual males.^{3–6}

Most individuals with an *E. histolytica* infection have no symptoms, although some develop severe invasive disease such as amebic colitis.⁷ Endoscopic examination of symptomatic patients shows discrete round ulcers covered with white or yellow exudate over normal-appearing mucosa of the entire colon and rectum.^{8,9} However, there are few reports of endoscopic findings in asymptomatic patients.^{10,11} We report four patients with asymptomatic amebic colitis and their characteristics.

Between September 1995 and August 2003, a total of 5,193 patients underwent colonoscopic examinations at our institutes because of positive results in fecal occult blood tests. Four (0.1%) patients were diagnosed with amebic colitis. All were middle-age heterosexual men without any gastrointestinal symptoms and negative for antibodies to human immunodeficiency virus. Three had a history of a visit to southeast Asia. Results of physical examinations showed no remarkable findings. White blood cell counts and levels of hemoglobin, blood urea nitrogen, creatinine, electrolytes, liver enzymes, and C-reactive protein were within normal ranges. Imaging modalities including ultrasonography, computed tomography, and chest radiographs showed no abnormal findings.

Colonoscopy showed irregular shaped small ulcers and erosions surrounded by inflammatory mucosa (Figure 1). These lesions were limited to the cecum in three patients, and located in the cecum and ascending colon in one patient. Mucosal inflammation was not observed in another portion of the colon and rectum. Biopsy specimens showed trophozoites of *E. histolytica* within the inflammatory debris. All four patients were treated with metronidazole (500 mg orally per

day) for two weeks. Three to four months after treatment, colonoscopy showed complete resolution of the lesions.

Ingestion of the cysts of *E. histolytica* in fecally contaminated food or water initiates infection. The cecum is the major site of infection with subsequent distal sites.¹² As long as the parasite remains in the cecum and its vicinity, symptoms may not appear in some cases. We may have detected this type of case by colonoscopy. These cases may be a source of infection. However, they were successfully treated with metronidazole.

The fecal occult blood test is widely used for colorectal cancer screening.¹³ Colonoscopy was subsequently performed in the subjects with positive result in the fecal occult blood test. Many colorectal diseases other than colorectal cancer have been found by this process. Inflammatory bowel diseases, including ulcerative colitis and Crohn's disease, and

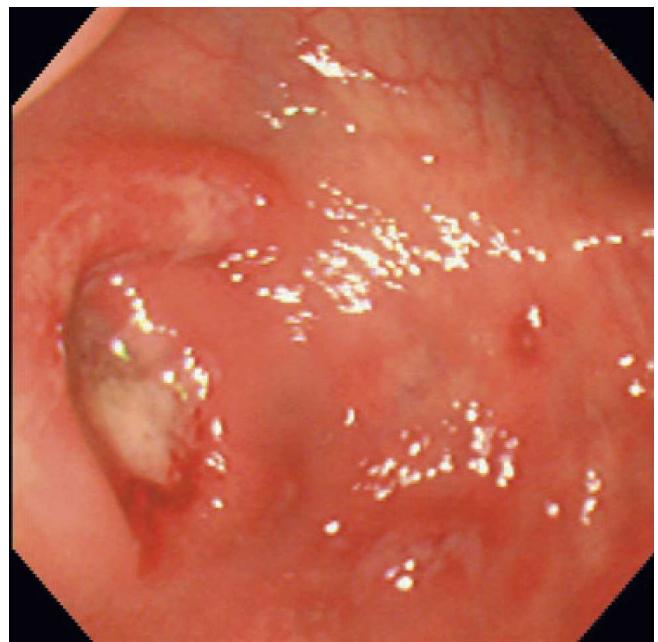


FIGURE 1. Colonoscopic examination of a 58-year-old man, showing an irregular-shaped ulcerated lesion covered with white exudate in the cecum.

* Address correspondence to Makoto Okamoto, Department of Gastroenterology, Faculty of Medicine, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8655, Japan. E-mail: okamoto-2im@h.u-tokyo.ac.jp

other relatively rare conditions have been observed.^{14,15} Thus, since asymptomatic cases with amebic colitis can be detected by colonoscopy, physicians should suspect this parasitic disease even in asymptomatic cases.

Received January 20, 2005. Accepted for publication May 15, 2005.

Authors' addresses: Makoto Okamoto, Yutaka Yamaji, Hirotsugu Watabe, Tsuneo Ikenoue, Haruhiko Yoshida, and Masao Omata, Department of Gastroenterology, Faculty of Medicine, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8655, Japan, Telephone: 81-3-3815-5411 extension 33056, Fax: 81-3-3814-0021, E-mail: okamoto-2im@h.u-tokyo.ac.jp. Takao Kawabe, Department of Gastroenterology, Faculty of Medicine, University of Tokyo, 7-3-1 Hongo, Bunkyo-ku, Tokyo, 113-8655, Japan and Department of Gastroenterology, JR Tokyo General Hospital, Tokyo, Japan. Ken Ohata, Gouichi Togo, Tetsuya Hada, and Tetsuro Katamoto, Department of Gastroenterology, JR Tokyo General Hospital, Tokyo, Japan. Masataka Tanno, Department of Pathology, JR Tokyo General Hospital, Tokyo, Japan. Masayuki Matsumura, Department of Gastroenterology, Institute for Adult Diseases, Asahi Life Foundation, Tokyo, Japan.

REFERENCES

- Walsh J, 1988. Prevalence of *Entamoeba histolytica* infection. Ravdin JI, ed. *Amebiasis: Human Infection by Entamoeba histolytica*. New York: John Wiley and Sons, 93–105.
- WHO Scientific Working Group, 1985. Amoebiasis and its control. *Bull World Health Organ* 63: 417–425.
- Markell EK, Havens RF, Kuritsubo RA, Wingerd J, 1984. Intestinal protozoa in homosexual men of the San Francisco Bay area: Prevalence and correlates of infection. *Am J Trop Med Hyg* 33: 239–245.
- Larsson PA, Olling S, Darle N, 1991. Amebic colitis presenting as acute inflammatory bowel disease. *Eur J Surg* 157: 553–555.
- Ohnishi K, Murata M, 1997. Present characteristics of symptomatic amebiasis due to *Entamoeba histolytica* in the east-southeast area of Tokyo. *Epidemiol Infect* 119: 363–367.
- Takeuchi T, Okuzawa E, Nozaki T, Kobayashi S, Mizokami M, Minoshima N, Yamamoto M, Isomura S, 1989. High seropositivity of Japanese homosexual men for amebic infection. *J Infect Dis* 159: 808.
- Guerrant RL, 1986. Amebiasis: Introduction, current status, and research questions. *Rev Infect Dis* 8: 218–227.
- Juniper K, 1978. Amoebiasis. *Clin Gastroenterol* 7: 3–29.
- Chessler RK, Rosenthal WS, Pitchumoni CS, 1978. Masquerading colitis: Infectious dysentery superimposed on chronic inflammatory bowel disease. *J Med Soc N J* 75: 161–164.
- Weinrach DM, Wang KL, 2003. Amebic colitis in an asymptomatic patient. *Arch Pathol Lab Med* 127: 762.
- Yoshikawa I, Murata I, Yano K, Kume K, Otsuki M, 1999. Asymptomatic amebic colitis in a homosexual man. *Am J Gastroenterol* 94: 2306–2308.
- Brandt H, Tamayo RP, 1970. Pathology of human amebiasis. *Hum Pathol* 1: 351–385.
- Winawer S, Fletcher R, Rex D, Bond J, Burt R, Ferrucci J, Ganiats T, Levin T, Woolf S, Johnson D, Kirk L, Litin S, Simmang C; Gastrointestinal Consortium Panel, 2003. Colorectal cancer screening and surveillance: clinical guidelines and rationale—updated based on new evidence. *Gastroenterology* 124: 544–560.
- Sakata T, Niwa Y, Goto H, Hirooka Y, Hayakawa T, Ohmiya N, Kobayashi S, 2001. Asymptomatic inflammatory bowel disease with special reference to ulcerative colitis in apparently healthy persons. *Am J Gastroenterol* 96: 735–739.
- Howarth GF, Robinson MH, Jenkins D, Hardcastle JD, Logan RF, 2002. High prevalence of undetected ulcerative colitis: data from the Nottingham fecal occult blood screening trial. *Am J Gastroenterol* 97: 690–694.