ABSTRACT
Amebiasis has been increasingly reported relating to HIV-infected patients especially among men who have sex with men. It seems to be an invasive form in HIV-infected patients. Mortality from amebiasis is low and usually related to a delay in diagnosis. We present an HIV-positive man with caecum perforation. Trophozoites of *E. histolytica* were found on biopsy. The patient responded well to treatment with metronidazole for a few weeks. (J Infect Dis Antimicrob Agents 2010;27:39-42.)

INTRODUCTION
*Entamoeba histolytica* is a pathogenic ameba that causes invasive intestinal and extraintestinal diseases. The protozoan infection usually remains asymptomatic and perhaps, is harmless in most instances. Its cystic form can survive in stools for weeks after shedding, which is the main source of transmission. Amoebic cysts have been found frequently in the stools of homosexual men. Thus, transmission by oro-anal or genitor-anal contact is considered important. Invasive amebiasis rarely occurs in homosexual men and human immunodeficiency virus (HIV)-infected individuals. It has not been regarded as a beacon for concomitant HIV infection. Whether HIV is associated with ameba is controversial and the status of CD4 relation is controversial too.

CASE REPORT
A 40-year-old man was admitted with history of fever and acute abdominal pain for one day. His characteristics of pain were severe and localized at right lower quadrant area which did not refer to anywhere. He was found to have HIV infection with positive anti-HIV antibody and CD4 cell count was 137 (15.1%) cells/mm³. His physical examination revealed temperature of 38.2°C, normal blood pressure, and respiration. On abdominal examination, we found severe pain with maximum degree at right lower quadrant and rebound tenderness. Complete blood count revealed a hematocrit of 37 percent, a white cell blood count of 23,300/mm³ (84% neutrophils, 5% lymphocytes, 3% monocyte, 1% eosinophil, and 7% band form) and adequate platelet. Stool analysis due to history
of diarrhea revealed neither RBC nor parasite. Chest X-ray was normal. Ultrasound: tubular mass at right lower quadrant with perifocal edema was seen. Surgeon did explore laparotomy because of suspicion of ruptured appendicitis. Operative findings were ruptured caecum, whereas, the other parts of intestine were normal. Right half colectomy was done. Amoxycillin-clavulanate was prescribed with a dose of 1.2 g intravenous every 8 hours. After one week with afebrile condition, biopsy showed trophozoites of *E. histolytica* as Figures 1 and 2.

**DISCUSSION**

We present the patient with acute right lower quadrant pain and signs of peritonitis. The appendicitis is not difficult to be diagnosed if the patient is an immune-competent person. The differential diagnosis is infectious colitis, enteric fever, inflammatory bowel disease, and tuberculosis. However, if the patient is immuno-

![Figure 1. Trophozoite with erythrophagocytosis: H & E x 200.](image1)

![Figure 2. Mucosa containing dense infiltrates of neutrophils and several trophozoites: H & E x 100.](image2)
compromised host, such as HIV-infected individuals, a wide range of pathogens have been reported, including cytomegal virus, *Mycoplasma* spp. (*M. tuberculosis* and *Mycoplasma avium* Complex), *E. Histolytica*. The case report also showed suspected two organisms. The patient had high antibodies to *E. histolytica* and biopsy showed inclusion bodies of cytomegalovirus. The case report also showed suspected two organisms. The patient had high antibodies to *E. histolytica* and biopsy showed inclusion bodies of cytomegalovirus.6 Amoebiasis is associated with ulcers in the sigmoid, rectum and most commonly in the caecum. It can cause extraintestinal infection such as liver abscess, pleuropulmonary, peritoneal and cerebral amoebiasis. The diagnosis in this patient was by pathological report which retrieved the specimen by explorative laparotomy with surgical colon resection. Nevertheless, pathological results can be obtained by examination of the tissue biopsy from colonoscopy. Pathology of amoebiasis, usually, shows dense infiltrate of neutrophils as well as lymphocytes in the lamina propria. Mucin was depleated in the epithelial cells. Trophozoites of *E. histolytica* were round to oval, approximately 25 to 40 μm in diameter. PAS stain was particularly useful in highlighting the trophozoites within the exudates. Other methods to support the diagnosis of amoebiasis are *E. histolytica* antibodies and stool examination. There is a limitation on using *E. histolytica* antibodies as the following; we cannot differentiate between past infection and current infection; positive titer may last for months to 20 years after primary infection and occasionally, it may be negative even in the presence of active disease. For stool examination, previous articles suggested 3 specimens weekly are more likely to yield positive result than 3 sequential specimens daily. However, we cannot differentiate *E. dispar* and *E. moshkovskii*, which are morphologically similar to *E. histolytica*. Other protozoa can infect the gastrointestinal tract such as *Giardia lambria* and the spore-forming parasites (cryptosporidium, cyclospora, *Isospora belli* and microsporidia). The spore-forming parasite leads to self limitation in persons with normal immune systems and symptoms are usually chronically relapsing. HIV and tropical diseases may alter the natural history of each other in some diseases. For example, leishmaniasis manifests like an opportunistic infection and possible disseminate to atypical sites and it also upregulates HIV replication in monocyctic and CD4 T cells. Studies of comparison of clinical characteristics of amoebiasis in HIV-infected and non-HIV-infected patients have not been done much, however, they seem not to be different except by the invasiveness of the disease. Reports from Australia and Japan described an increase of incidence of amoebiasis in men who have sex with men (MSM). The explanation may be because the incidence in general population is low but it is rising in MSM. In Australia, 1-4 percent of *Entamoeba* spp. infection was found in general population, whereas, it is as high as 37 percent in MSM. However, species of *entamoeba* are not specified in this study. Studies from North America showed that 21 percent to 32 percent of homosexual men carry aemabas in their GI tracts. The stools of MSM are also more likely to harbor multiple parasites other than *Entamoeba* spp. The reason why invasive amoebiasis rarely occurs in western homosexual men, including HIV- infected patients remain obscure and previous studies have suggested that pathogenicity of the ameba may be enhanced by immunosuppression. Evaluation of amebic cysts in stool of homosexual men showed almost all isolates belonged to the non pathogenic species in individuals in the Western countries. In Asian countries (such as Taiwan, Japan and perhaps Thailand), a preferential colonization of pathogens of *E. histolytica* to Western countries was hypothesized. Cell-mediated immunity, represented by CD4 cell count, in HIV-infected individual is not deeply involved
in amebic infection. The reported level of CD4 cell count among HIV-infected who had amebiasis was varied.9-10 Also, the CD4 status reported from many Asian countries is variable. Report of three cases of amebic liver abscess by PCR assay of amebic 16S rRNA of Lin et al showed CD4 of 84, 254, and 367 cells/mm³.10 Report of six cases by Mittarai et al showed CD4 of 6, 258, 421, and 429 cells/mm³ in 5 cases.9 Report of 5 cases of Stark et al showed CD4 of 256, 672, 754, and 756 cells/mm³ in 4 cases. That means CD4 status cannot help us to exclude or include amebiasis in our differential diagnosis.

Treatment of amebiasis for mild to moderate degree of disease, patients can receive oral metronidazole 500-750 mg tid for 10 days. However, if the patient has severe degree like this patient who has perforation of visceral organ the duration may extend to nearly one month and surgical intervention may be crucial on some occasions.

In conclusion, amebiasis has been reported increasingly with relation to HIV-infected patients. However, in this patient the author does not know whether he is MSM or not. As for HIV infected patients, any organism may be the cause of their illness.

References