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Authors

Kaushal, Rajinder

Brar, Balbir

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CLINICAL VIGNETTE

Amebic Colitis

Rajinder Kaushal, MD and Balbir Brar, MD

Amebiasis occurs worldwide but is more prevalent in developing countries due to poor hygienic and sanitation conditions. In developed countries, it is mostly seen in migrants from or travelers to endemic areas. We describe a case of amebic colitis and discuss its epidemiology, clinical features, diagnosis and treatment.

Case Report

A 52-year-old previously healthy male was seen for three weeks of intermittent rectal bleeding. He described the bleeding as bright red blood mixed with the stools and also on the toilet paper. He also complained of mild periumbilical discomfort, occasional loose stools and urgency to have a bowel movement within a short time of having a meal. There was no mucus in the stools. There was no recent antibiotic use. Seven months before the visit he had taken a short vacation in the Philippines. He had remained well while in Philippines and on his return to the United States. There was no family history of inflammatory bowel disease, colon cancer or colon polyps. He had never been screened for colon cancer. Physical examination was remarkable for slight amount of dark blood on rectal examination. The remainder of the physical examination was normal.

A diagnostic colonoscopy was performed. Spontaneously bleeding, dusky and necrotic appearing rectal mucosa was noted from anorectal junction extending 15 cms into the rectum (Figure 1). The remainder of the rectum, sigmoid colon and distal descending colon appeared completely normal (Figure 2). Proximal descending, transverse as well as ascending colon and cecum had patchy areas of hyperemic mucosa and superficial shallow ulcers with intervening normal appearing mucosa. Terminal ileum appeared grossly normal. The endoscopic findings were most consistent with inflammatory bowel disease. Biopsy of terminal ileum revealed normal intestinal mucosa. Except for sigmoid colon, biopsies throughout the colon and rectum all revealed *Entamoeba histolytica* colitis (Figures 3, 4). Interestingly the sigmoid colon which appeared normal on colonoscopy, had no *Entamoeba histolytica* organisms or inflammation on the biopsies. The final diagnosis was *Entamoeba histolytica* colitis. He was prescribed Metronidazole 500 mg tid for 10 days to be followed by Paromomycin 500 mg tid for the following 10 days. He was advised to return after completion of the treatment but the patient never returned and was lost to follow up.

Discussion

Intestinal amebiasis is caused by *Entamoeba histolytica*. Though usually asymptomatic, the infection can cause colitis or extraintestinal disease such as liver abscess or rarely pulmonary, cardiac or cerebral manifestations. Amebiasis is responsible for 100,000 deaths annually.¹ There are four species of intestinal amebae: *E. histolytica*, *E. dispar*, *E. moshkovskii*, and *E. bangladeshi*.¹ Most symptomatic disease is caused by *E. histolytica*. Other species are nonpathogenic.¹ High rates of amebic infection are seen in India, Africa, Mexico, and parts of Central and South America.

Life Cycle

Humans are the only host for amebiasis. Ameba lives in human intestines in two forms: trophozoites which cause disease; and cysts which are the infective form. Cysts and trophozoites are both passed in feces. Cysts are typically found in formed stool, whereas trophozoites are typically found in diarrheal stool. Cysts can survive days to weeks in the external environment but excreted trophozoites are rapidly destroyed. Infection by *Entamoeba histolytica* occurs by ingestion of mature cysts in fecally contaminated food, water, or hands. Excystation occurs in the small intestine and trophozoites are released, which migrate to the large intestine and cause disease. Trophozoites can invade the blood stream and cause extraintestinal disease in the liver, brain, and lungs.² Transmission can also occur through exposure to fecal matter during sexual contact.³

Clinical Features

Up to 90 percent of *E. histolytica* infections are asymptomatic.⁴ Risk factors for severe disease include young age, pregnancy, corticosteroid treatment, malignancy, malnutrition, and alcoholism.⁵ Patients with amoebic colitis who receive steroids for initially misdiagnosed colitis have rapid progression of disease with up to 25 percent mortality.⁶ Clinical features are usually subacute in onset and may include mild diarrhea, abdominal pain, bloody stools and rarely fulminant colitis. Intestinal amebiasis may cause chronic diarrhea, weight loss, and chronic rectal bleeding lasting for years and can be mistaken for inflammatory bowel disease.⁴ Uncommon presentations include appendicitis, perianal cutaneous amebiasis, rectovaginal fistulae^{7,8} and a localized mass of granulation tissue forming an ameboma mimicking colon cancer.⁹

Diagnosis

Amebiasis can be diagnosed by stool microscopy, stool antigen detection, stool polymerase chain reaction (PCR), stool DNA, serology and colonoscopy with histologic examination. Stool antigen and PCR tests are more sensitive than microscopy and can also differentiate between *E. histolytica* and *E. dispar* infections. Positive serology cannot distinguish between acute and previous infections but a negative serology test rules out amebic infection.⁴ Only *E. histolytica* infection results in the development of serum antibodies as *E. dispar* infection does not. Colonoscopy can establish the diagnosis of amebiasis to exclude other causes of similar symptoms such as infectious colitis and inflammatory bowel disease.

Treatment

Both symptomatic as well as asymptomatic *E. histolytica* infections should be treated. In symptomatic patients, treatment is directed first against trophozoites and is then followed by cyst eradication treatment. While in asymptomatic patients treatment is only necessary to eradicate the cysts. The drug of choice

to eradicate trophozoites is metronidazole 500 mg tid for 10 days. Tinidazole, ornidazole, and nitazoxanide have also been used. This is then followed by paromomycin 25 to 30 mg/kg per day orally in three divided doses for 7 days for cyst eradication. Diiodohydroxyquin and diloxanide furoate have also been used to eliminate intraluminal cysts.¹⁰

Amebic infection can be avoided by drinking boiled water and avoiding uncooked food while traveling to endemic areas. Fecal-oral sexual practices should be avoided.

Conclusion

Amebic colitis mimics inflammatory bowel disease (IBD) in both symptoms and colonoscopy findings. It should be ruled out in immigrants from or travelers to the endemic areas who present with symptoms of abdominal pain, diarrhea and rectal bleeding. Patients with amoebic colitis who receive steroids for initially misdiagnosed colitis have rapid progression of disease with up to 25 percent mortality.

Figures



Figure 1



Figure 2

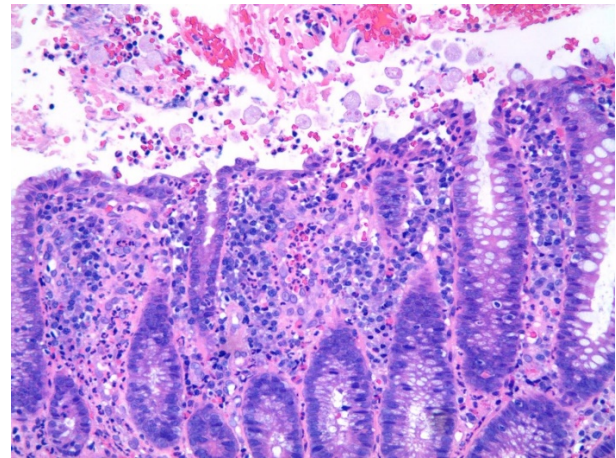


Figure 3

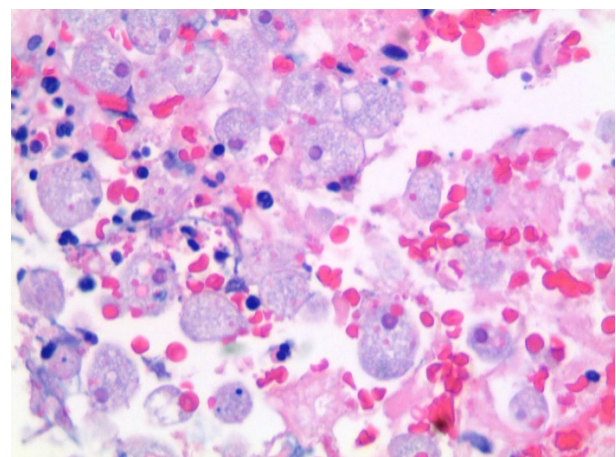


Figure 4

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