

# Case report: Cecal ameboma as a complication of intestinal amebiasis

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## Abstract

We report the case of a patient with cecum ameboma, an uncommon intestinal manifestation of amebiasis. Patient underwent surgery after an initial diagnosis of a perforated cecal neoplasm of an appendiceal adhesion mass. Histology confirmed the presence of trophozoites of *E. histolytica* in an area of ulceration and necrosis of the cecum wall. While initially the ameboma was treated medically, clinical manifestations led to surgery with good evolution.

## Key words

Ameboma, cecum, amebiasis.

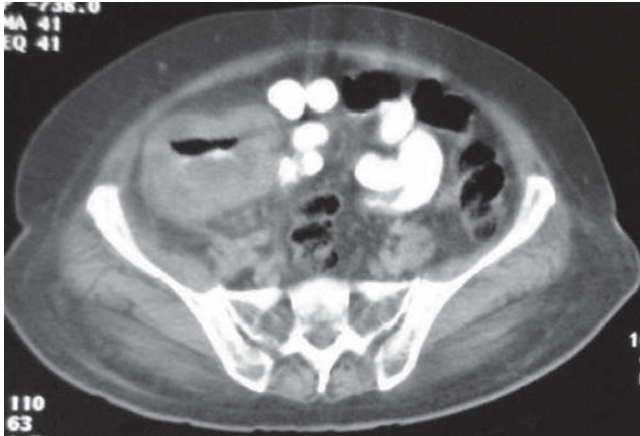
## INTRODUCTION

Amebiasis is one of the most frequent parasitosis worldwide, but its incidence is higher in developing and third world countries in which general levels of health are lower and where water potable water is not always available. Infections caused by *E. histolytica* are the second most common type of parasitosis in the world (Malaria is the first.), accounting for between 40,000 and 100,000 deaths annually (1, 2). The *E. histolytica* entamoeba invades the host tissue in trophozoite form and destroys the tissue by secreting proteins and capturing red blood cells. This leads to its most frequent clinical presentation of amebiasis (amebic dysentery or amebic colitis), but it can also appear in uncommon forms such as necrotic colitis, toxic megacolon, ulceration, perianal fistulas apart from ameboma (3, 4). For this case report we performed a systematic search of the literature from Latin America, Colombia, and elsewhere in the world and found very few reported cases. Most of the published information about this type of complication comes from Third World countries.

## CLINICAL CASE PRESENTATION

A 53 year old female patient came to the urgent care clinic at the University Hospital of Neiva in Huila, Colombia. For five days she had suffered from epigastric pain and pain in the periumbilical region that radiated to the right iliac fossa and then became generalized abdominal pain. The patient also presented hyporexia and fever from an unknown cause. The patient had a clinical history of Type 2 diabetes mellitus and poorly controlled arterial hypertension. During the physical examination the patient's heart rate was 100 per minute and her arterial blood pressure was 140/80mmHg. Physical examination of the abdomen showed pain and the sensation of a mass in the right iliac fossa which led to a first approximate diagnosis approach of appendicitis complicated by a mass of appendiceal adhesions or a possible tumor of a perforated cecum. A complete blood count showed a leukocyte level of 18,900, neutrophils at 89%, lymphocytes at 4.8%, a platelet level of 24,1000, hemoglobin at 6.7gr/dl, PCR 28, creatinine at 1.48mg/dl, and ureic nitrogen at 24 mg/dl. We decided to transfuse 2 units of packed red

blood cells per hour. Treatment began with 200mgs IV ciprofloxacin every 12 hours and 500 mgs IV metronidazole every 8 hours. A CAT scan showed the presence of a soft tissue injury located on the cecal wall. It reduced the intestinal diameter and was probably related to a neoplastic process (Figure 1).



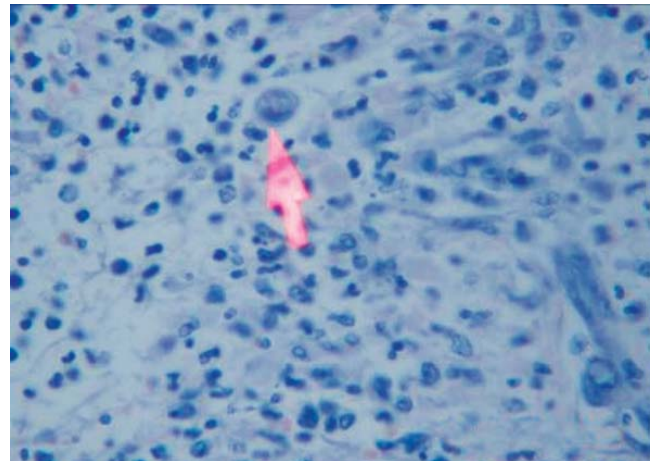
**Figure 1.** Computerized axial tomography with contrast showing lesion in the cecal wall with dense soft tissue diminishing the diameter of the colon.

24 hours after admittance, the intensity of the patient's pain increased and was combined with involuntary abdominal defense. As this was compatible with acute abdomen requiring surgical treatment the patient underwent an exploratory laparotomy which found 500 cc of yellow liquid in 4 quadrants with a 15cm x 15cm hard mass in the cecum adhering to the right broad ligament of the uterus. A right radical hemicolectomy with a terminal lateral ileoileostomy using mechanical sutures was performed. During surgery we began to suspect that the patient suffered from cecal ameboma. Post-operative treatment continued with antibiotics. The oral route was reinitiated three days after surgery. Seven days after surgery the patient could tolerate eating soft foods and was discharged from the hospital. A review of the acid-Schiff (PAS) stain from pathology revealed severe amoebic colitis with ulceration and necrosis plus benign lymphoid hyperplasia, but there were no signs of malignancy (Figure 2).

## LITERATURE REVIEW

*E. histolytica* infections which cause amebiasis begin with ingestion of water contaminated with fecal matter containing cysts of the ameba (1). Trophozoites of the ameba are released into the lumen of the gastrointestinal tract where they rapidly clone themselves. This expanded trophozoite population later forms new cysts which perpetuate the cycle when they are excreted in the infected individuals

feces (1,2,3). The infection can be located in any part of the intestine, but are most likely to be found in the cecum and the ascending colon (4, 5). Gastrointestinal presentations of *E. histolytica* infections range from asymptomatic (carrier) to colitis and the formation of abscesses and intestinal perforations. Amebiasis is common in developing countries in which up to 10% of the populations may be infected, but it is uncommon in developed countries. In 1991 The World Journal of Surgery published an article by Dr. Humberto Aristizabal on fulminating amoebic colitis in Colombia (6).



**Figure 2.** This microscopic view of the cecal wall after staining with hematoxylin-eosin dye shows severe inflammation and the presence of trophozoites compatible with severe amoebic colitis.

Since this infection's clinical manifestations are not specific, it is necessary to consider uncommon clinical presentations to make a correct diagnosis (7). It has been reported that 55% of all patients who present extracolonic amebiasis also present ulcers in the region of the ileocecal valve. These ulcers can be precursors to masses. Generally this is due to repeated episodes of untreated or partially treated amoebic colitis (8,9). Amebomas at the intestinal level are mostly located in the cecum and the ascending colon and can simulate colon carcinomas (10). Sometimes they appear as a mass with granulated tissue caused by a local infection of amoebas. Since this could be confused with a neoplastic lesion, it is epidemiologically important to consider this entity as a possibility in patients who present ileocecal masses in zones where *E. histolytica* infections are endemic (11,12). The diagnostic approach of ileocecal masses includes ruling out other infectious and noninfectious causes. Consequently, blood tests for entamoebas are required.

The bias of these tests is high since the serum levels of entamoebas may be elevated up to 1 year after the infection begins and because these tests do not distinguish between *E. histolytica* infections and *E. dispar* infections. Nevertheless,

blood tests continue to be the test of choice in countries where infection is not prevalent (13).

Symptoms leading to differential diagnoses of amebomas include all ileocecal masses ranging from tuberculomas, lymphomas, appendicitis, and adenocarcinomas to those associated with Crohn's disease and infections by atypical fungi on to blood vessel malformations and diverticulitis (14). It has been calculated that 1.5% of all amebiasis infections result in the colonic masses called amebomas (15,16).

Considering that the majority of these lesions are discovered incidental to laparotomies, it is necessary to stress that this entity should be medically treated with tissue imidazole and luminal agents for 15 to 21 days (17, 18). It is vitally important to take a good clinical history and have a good diagnostic approach for suitable interpretation of endoscopic and radiologic images (19).

## CONCLUSIONS

Amebiasis and its complications continue to be a public health problem in our developing countries. The differential diagnosis of masses located in the right colon, (cecum and ascending colon) must include the possibility of amebomas, the diagnosis of which requires an early colonoscopy, histopathologic studies and blood tests to check for the presence of intestinal amebiasis. These measures can lead to early diagnosis and to suitable treatment.

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