



Case Series

Multiple Faces of Amoebic Colitis

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ABSTRACT

Introduction: Amoebic colitis is a parasitic infection caused by *Entamoeba histolytica*, characterized by bloody diarrhea, abdominal pain, and weight loss, frequently stemming from poor sanitation. It is diagnosed via stool tests or biopsies showing trophozoites and is treated with metronidazole. Misdiagnosis as IBD is common, though immunosuppressants are contraindicated. The symptoms include abdominal pain, weight loss, fever, and bloody diarrhea, often presenting weeks after infection. Diagnosis requires stool antigen tests, PCR, or histological analysis of colonic biopsies to detect *E. histolytica*. Endoscopic findings often show multiple irregularly shaped ulcers. Primary treatment is with metronidazole. In severe cases with perforation, surgery (e.g., hemicolectomy) may be required. It can lead to fulminant colitis, toxic megacolon, or extraintestinal spread, notably causing amoebic liver abscesses.

Case Series: First case was of a young male of 31 years who presented with pain abdomen for last three months, fever for last two weeks and dysentery for last one week. He had been partially treated with antibiotics, anti-spasmodic and probiotics by private practitioners but for no relief. He was started on broad spectrum antibiotics but got mild relief only. Thus, he was subjected to colonoscopy for determining exact diagnosis which revealed diffuse recto-sigmoid ulceration. The histopathological examination of colonic biopsies revealed amoebic colitis. Patient was put on one week metronidazole therapy and got complete relief. He was absolutely normal on follow up after one month. Second case was of forty two - year male presented with symptoms of fever for last one month, pain abdomen and diarrhea for twenty days. He sought consultation from local practitioners but for no relief. The pain abdomen was mainly in left iliac fossa but was gradually progressive in intensity with passage of time. The ultrasonogram abdomen showed thickening in recto-sigmoid area with suspected mass lesion. Thus, for ruling out malignancy and confirming the diagnosis, he was subjected to colonoscopy which revealed a mass lesion in recto-sigmoid area. The histopathological examination of colonic biopsies revealed amoebic colitis. Patient was put on one-week injectable metronidazole therapy, followed by three weeks of oral therapy, along with luminal agents to prevent recurrence. Patient got complete relief within two weeks and is asymptomatic after three months follow-up.

Conclusion: Amoebiasis can have different clinical presentations, and even radiological and Colonoscopic findings can diverge from patient to patient. Hence, broad view about the same is required by the health professionals, for timely diagnosis and right line of treatment.

Keywords: Dysentery, Amoebic colitis, colonoscopy, Biopsy, Trophozoites.

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INTRODUCTION

The protozoan *Entamoeba histolytica* (*E. histolytica*) is the cause of the infectious illness amoebiasis. Amoebiasis, it is an important problem for those living in regions where the epidemic is high, especially developing countries. The clinical manifestations of colorectal amoebiasis can range from an asymptomatic carrier to severe fulminant necrotizing colitis that has perforations and bleeding. In some patients, infection may progress to aggressive colitis and ameboma

development, which bears a striking resemblance to colorectal malignancy and requires proper differentiation, so that appropriate treatment is given and unnecessary surgical procedures are avoided [1]. According to Tanaka et al [2], the spectrum of computed tomography (CT) findings in amoebic colitis includes wall thickening, mucosal enhancement, and mesenteric fat stranding, which can be pivotal in distinguishing it from other gastrointestinal diseases [3]. The ameboma formation is typically linked to undiagnosed or inadequately treated colonic amoebiasis. After amoebiasis, there is a 1% to 2% chance of developing an ameboma [4,5]. Ameboma is characterized as a thickening of the colon tissue that is proliferative and fibrotic, resulting from the invasion of amoebae and synergistic bacteria. The cecum is the most often affected area by ameboma with a rate of about 40%. The rectosigmoid region is the second most prevalent site. Ameboma in the rectum is uncommon, nonetheless [4-7]. Clinically, symptoms of right lower quadrant pain, distension, or intestinal obstruction are frequently observed.

CASE SERIES

Case 1- A young male of thirty-one years presented with pain abdomen for last three months, fever for last two weeks and dysentery for last one week. He had been partially treated with antibiotics, antispasmodics and probiotics by private practitioners but for no relief. The pain abdomen was mainly in left iliac fossa and was almost continuous and dull aching. On physical examination, the patient was conscious, co-operative, in discomfort, febrile and mildly anemic. The systemic examination including chest, cardiovascular, central nervous system, ophthalmological and dermatological was normal. The complete hemogram revealed hemoglobin of 9.7 g/dL, white blood cell counts 14,300/L, microcytic hypochromic anemia with no malaria parasite. The renal & liver function test, blood sugar, serum amylase & electrolytes, serum vitamin B12, D3, folic acid levels, urine & blood culture, thyroid & complete lipid profile, viral screen including hepatitis B, C, HIV were all essentially normal. The electrocardiogram, chest x-ray and ultrasonogram abdomen were normal. The stool examination was non-contributory. He was started on broad spectrum antibiotics but got mild relief only. Thus, he was subjected to colonoscopy for determining exact diagnosis which revealed diffuse recto-sigmoid ulceration. The histopathological examination of colonic biopsies revealed amoebic colitis. Patient was put on one week metronidazole therapy and got complete relief. He was absolutely normal on follow up after one month.

Case 2- A forty two -year male presented with symptoms of fever for last one month, pain abdomen and diarrhea for twenty days. He sought consultation from local practitioners but for no relief. The pain abdomen was mainly in left iliac fossa but was gradually progressive in intensity with passage of time. On physical examination, the patient was conscious, co-operative, in discomfort and febrile. The systemic examination including chest, cardiovascular, central nervous system, ophthalmological and dermatological was normal. The complete hemogram revealed hemoglobin of 10.8 g/dL, white blood cell counts 13,700/L, microcytic hypochromic anemia with no malaria parasite. The renal & liver function test, blood sugar, serum amylase & electrolytes, serum vitamin B12, D3, folic acid levels, urine & blood culture, thyroid & complete lipid profile, viral screen including hepatitis B, C, HIV, stool examination were all essentially normal. The electrocardiogram and chest x-ray were normal but ultrasonogram abdomen showed thickening in recto-sigmoid area with suspected mass lesion. Thus, for ruling out malignancy and confirming the diagnosis, he was subjected to colonoscopy which revealed a mass lesion in recto-sigmoid area. The histopathological examination of colonic biopsies revealed amoebic colitis. Patient was put on one-week injectable metronidazole therapy, followed by three weeks of oral therapy, along with luminal agents to prevent recurrence. Patient got complete relief within two weeks and is asymptomatic after three months follow-up.

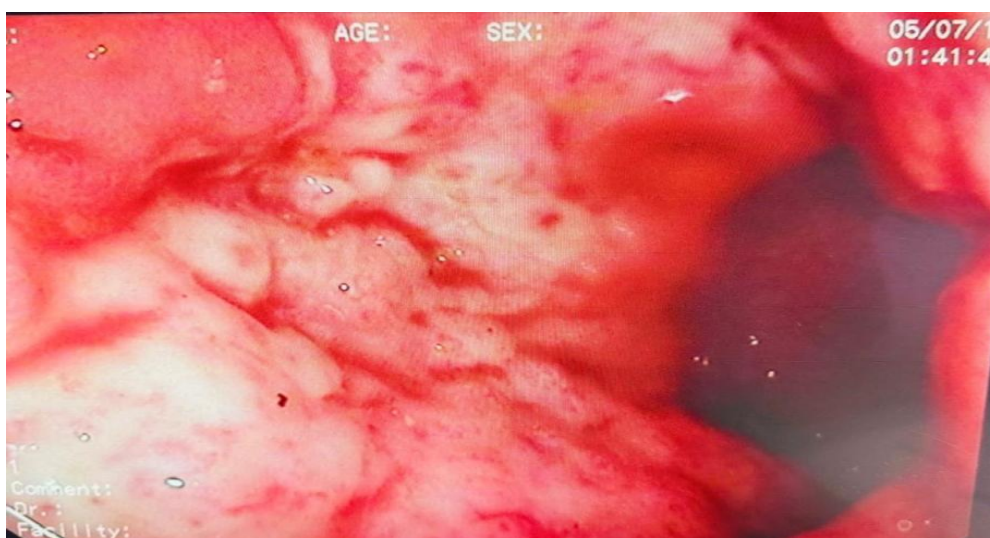


Figure 1- Colonoscopy showing recto-sigmoid ulceration in Amoebic colitis



Figure 2- Colonoscopy showing recto-sigmoid Ameboma in Amoebic colitis

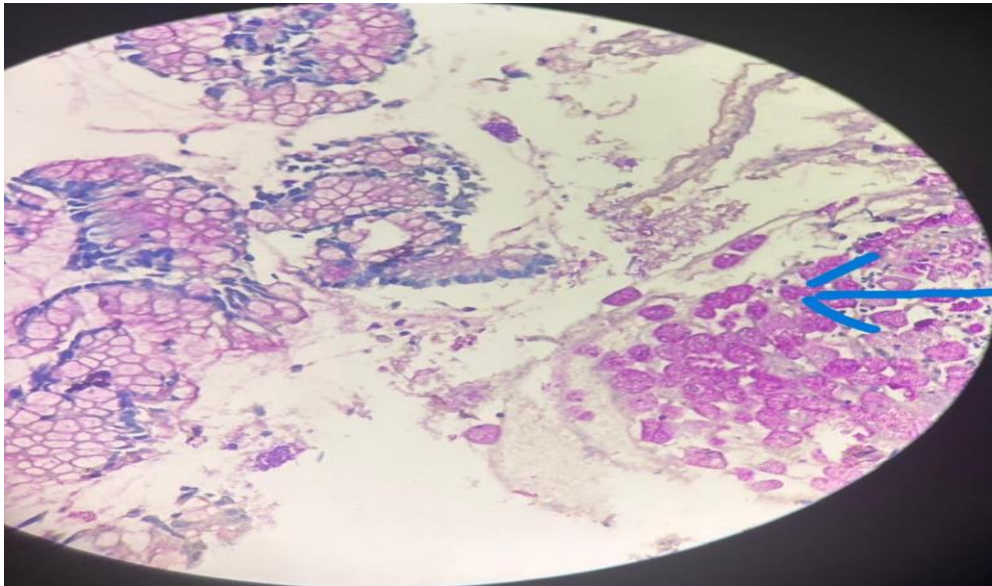


Figure 3- Rectal biopsy showing PAS positive trophozoites of *Entamoeba histolytica* (blue arrow)

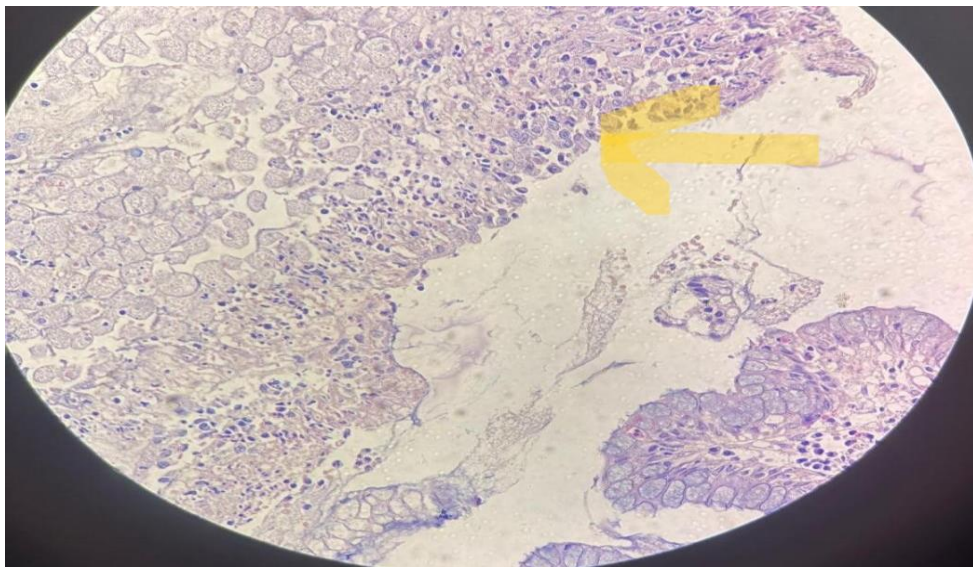


Figure 4- H & E Stain showing focally ulcerated rectal mucosa with sub-epithelial tissue showing inflammation and numerous trophozoites of *Entamoeba histolytica* (yellow arrow)

DISCUSSION

Amoebic colitis typically presents with abdominal pain and diarrhea, the vast majority of patients being asymptomatic carriers. It is mainly problem of developing countries with poor socioeconomic and sanitation conditions [8]. The clinical presentation of amoebic colitis is broad and may include cramping abdominal pain, diarrhea (watery and/or bloody), weight loss, and fever. Extra-intestinal manifestations occur via hematogenous spread to other organ systems such as the liver, brain, and lungs [9]. The differential diagnosis for *E. histolytica* intestinal amoebiasis includes bacterial pathogens such as shigella, *Escherichia coli*, salmonella, campylobacter, and *Clostridioides difficile*. These can be differentiated based on culture results or molecular diagnostic assays. Non-infective differentials include inflammatory bowel disease (IBD) and ischemic bowel disease [10]. Other differentials that should be considered include

atypical infections such as intestinal tuberculosis and cytomegalovirus (CMV) colitis, especially in immunosuppressed populations, and collagen vascular disorders such as lupus enteritis and Behçet disease [10]. Intestinal amoebiasis should be suspected in any case of acute or subacute diarrhea occurring over a period of 1-3 weeks [11]. Colonoscopy findings include caecal lesions, the presence of aphthae or erosions and exudates - features also typical in IBD or mass lesion of ameboma which mimics malignancy [11]. Amoebic colitis is treated with metronidazole or tinidazole for 7-10 days but in ameboma, the therapy is extended to one month. Diloxanide furoate or paromomycin for two weeks are given simultaneously to clear cysts.

CONCLUSION

Amoebiasis can have different clinical presentations, and even radiological and Colonoscopic findings can diverge from patient to patient. Hence, broad view about the same is required by the health professionals, for timely diagnosis and right line of treatment.

CONFLICT OF INTEREST

The authors declare that there was no conflict of interest and proper written consent was taken from the patients. Moreover, no financial support was taken for the same.

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