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A CASE OF AMOEBIC COLITIS WITH UNUSUAL PRESENTATION

Pathology

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ABSTRACT

Amoebiasis is a parasitic infection caused by Entamoeba histolytica occurring in populations with low socio-economic status and is transmitted by faeco-oral route. It mainly involves the intestine and liver and presents as acute abdomen and loose stools. A 73 years old female presented with pain in abdomen and loose stools since 2 days. Radiological investigations revealed inflammation of the appendix and thickening of the colonic wall and clinical presentation prompted emergency surgical intervention with a suspicion of Crohn's disease clinically and a postoperative diagnosis of amoebic colitis was made on histopathology.

KEYWORDS

Amoebic colitis; Entamoeba histolytica; Trophozoites

INTRODUCTION

Amoebiasis is a parasitic infection common in tropical countries and among populations with low socio-economic status living with poor sanitation. [1] It is caused by Entamoeba histolytica, a protozoan parasite [2] Humans become infected through faeco-oral route. The disease spectrum ranges from asymptomatic cases to severe manifestations involving the intestine. Liver abscesses are the most common extra-intestinal complication. Timely detection is necessary to contain and treat the disease process, a delay in diagnosis may be life threatening [3]. The majority of cases with intestinal illness remain asymptomatic. However, seldom the disease takes a fulminant acute course because of development of Necrotizing Amoebic Colitis resulting in formation of ulcers. In fact, a diagnosis of fulminant colitis due to amebic etiology is rarely made preoperatively even in endemic areas leading to rapid deterioration of the patient.[4]

CASE REPORT

73year old female presented with severe pain in abdomen since 6 days with history of loose stools (4-5 days) since 2 days. On examination the patient had tachycardia and there was tenderness and guarding/rigidity per abdomen. Complete haemogram was done and showed hemoglobin 10.3g/dl, total leucocyte count 23,000 cells/cumm. Urine routine and microscopy was done which demonstrated few pus cells and bacteria. USG – Abdomen and Pelvis suggested appendicitis with thickened ascending colon with free fluid in Pouch of Douglas. CECT revealed inflammation of the appendix along with thickening and reduction of the lumen of the ascending colon upto the hepatic flexure and one –third of transverse colon. Intravenous fluids and antibiotics were started and patient was taken for exploratory laparotomy and entire ascending colon, proximal one-thirds of the transverse colon along with appendix and a small segment of terminal ileum were resected. Surgeons strongly suspected Chron's disease on gross examination of the specimen.The specimen was sent for histopathological examination.

GROSS FINDINGS: The luminal surface of the ascending colon showed multiple shallow as well as large ulcers covered with yellowish white necrotic slough .

MICROSCOPIC FINDINGS: Multiple sections showed dense acute and chronic inflammatory cell infiltrate composed of neutrophils, eosinophils and lymphocytes extending into surrounding adipose tissue. There was dense acute inflammatory cell infiltrate with myonecrosis extending full thickness of the muscularis propria. Numerous scattered ovoid eosinophilic structures were noted with engulfed RBCs which were morphologically consistent with trophozoites of amoeba. PAS staining was done which highlighted these amoebic trophozoites. Appendix showed extensive mucosal ulceration and lymphoid hyperplasia. Unfortunately, due to post-operative complications the patient expired on day 7 of the surgery.

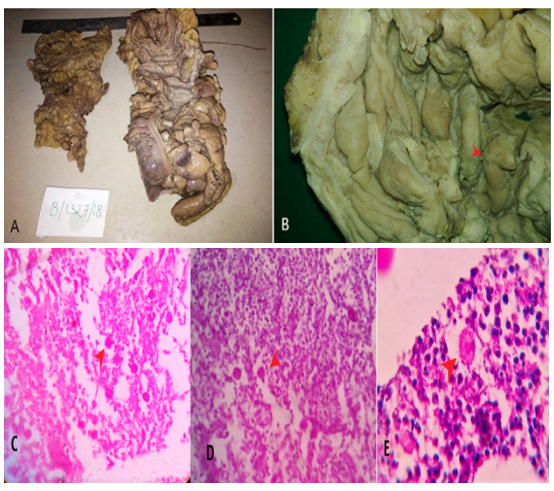

Figure A. Gross specimen showing the ascending colon, caecum, appendix and a part of the terminal ileum.

Figure B. Gross specimen of the ascending colon showing multiple pinpoint ulcers

Figure C and D. Low magnification view showing amoebic trophozoites along with hemorrhage, necrosis and inflammation

Figure E High magnification view showing amoebic trophozoite with RBC

DISCUSSION

The word "histolytica" literally means eating up the tissue [5] Generally Amoebiasis may involve any part of the bowel, but it has a predilection for the cecum and ascending colon. Extra intestinal involvement of the liver may occur in the form of amoebic liver abscess which has characteristic anchovy sauce like pus collection. Presentation of the intestinal illnesses has a spectrum ranging from asymptomatic

infection, symptomatic noninvasive infection, acute protocolitis (dysentery) to fulminant colitis with perforation [1] The most common presenting complaints are those of an acute abdomen with abdominal pain, loose stools and fever. [4] Mainly the mucosa is involved in amoebic colitis with multiple pinpoint shallow flask shaped ulcers which spread horizontally. However, few reports had shown that steroid treatment for inflammatory bowel disease induced amebic colitis leading to full thickness necrosis with colonic perforation. [6] Ochsner and Debakey formulated that the term "ameboma" originally described as amebic granuloma by Gunn and Howard. Ameboma of the large bowel is a rare condition that occurs in 1.5% of all cases with invasive amebiasis in which there is a mass of granulation tissue with peripheral rim of fibrosis and a core of inflammation due to chronic amebic infection. Untreated or partially treated infections with *E. histolytica* may lead to the development of tumor-like exophytic and inflammatory masses involving the whole thickness of bowel wall and may extend into surrounding structures. Amebomas are most commonly found in the cecum, the appendix, and rectosigmoid colon. Transverse colon, hepatic and splenic flexure are rarely involved. An ameboma usually presents as pain and lump in the right iliac fossa and/or symptoms of bowel obstruction. The presentation mimics appendicular abscess and Crohn's disease in younger individuals while colon cancer and diverticulitis in elderly. Hence, in elderly individual, ameboma can be misdiagnosed as colonic carcinoma. [7] Diffuse ulceration of the ileum and colon with perforation and serositis can occur due to inflammatory bowel disease, ischaemic colitis, vasculitides and infective causes, it is important to differentiate these conditions from each other. A diffuse ulcer having a shaggy necrotic base is seen in infective/ inflammatory pathology. Ulcerative colitis mostly involves the rectosigmoid and ileocaecal region. Transmural involvement in ulcerative colitis, can happen in toxic megacolon. Cröhn's disease involves the small and large intestine in patches with typical skip areas. [5] In many countries where amoebiasis is endemic, diagnosis of amoebic colitis is commonly made by identifying cysts or motile trophozoites in a saline wet mount of a stool specimen. Finding trophozoites containing ingested red blood cells in the stool is considered by many to be diagnostic for amoebic colitis. However, this method has low specificity because it is incapable of differentiating E. histolytica from nonpathogenic species such as E. dispar or E. moshkovskii. The accuracy of microscopic methods is highly dependent on the competence of the diagnostic laboratory. Specific and sensitive means comprise stool antigen detection test and PCR techniques based on RNA and DNA amplification. [8] The treatment goals are to treat the invasive disease and to eradicate intestinal organism. E. histolytica is found in three places the bowel lumen, in the bowel wall, and in other tissues like liver. Antiamoebic drugs vary in efficacy and are divided into two classes based on their main site of activity. Luminal amoebicides act mainly in the bowel lumen and the tissue amoebicides act on the bowel wall and the liver. [8] In order to eradicate cysts and prevent relapse luminal agent such as paromomycin should be used alongside tinidazole and metronidazole. Percutaneous drainage of ALA is not usually required. [2]

CONCLUSION

All ileocecal ulcers are not Crohn's always. A careful histopathological examination of all the specimens received is a must to establish a correct diagnosis because an incorrect diagnosis and treatement as Inflammatory bowel disease by steroids may further worsen the condition in a setting of amoebic colitis.

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