An Interesting Presentation of Ameboma – A Case Report and Review of Literature

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Abstract

Amebomas are masses of granulation tissue with peripheral fibrosis and a core of inflammation related to chronic infection with Entameba histolytica which is usually found in the cecum and ascending colon. The diagnostic approach of this ileocecal mass includes ruling out other infectious and noninfectious causes before arriving at a diagnosis of ameboma. It usually manifests with lower gastrointestinal bleeding or bowel obstruction. It may mimic cecal carcinoma when it occurs in elderly. Other differential diagnoses include Crohn's disease, Non-Hodgkin’s lymphoma, tuberculosis, fungal infection, AIDS-associated lymphoma and Kaposi’s sarcoma. The therapeutic strategy should be combined with antibiotics for invasive dysentery and eradication of luminal cysts. Surgery should be reserved as the last resort in cases of persisting sepsis, with obstruction and perforation being the other indications.

Key words: Ameboma; Ileocecal Mass;

Introduction

Entamoeba histolytica infection is common in developing countries due to the poor environment as well as in developed countries among travellers from highly endemic regions and among the immunocompromised population, including patients with AIDS or receiving organ transplantation [1]. Most patients with E. histolytica infection are asymptomatic, comprising about 90% of those infected [2]. Gastrointestinal presentations of E. histolytica infections range from asymptomatic (carrier) to colitis and the formation of abscesses and intestinal perforations. Amebomas are mostly located in the cecum and the ascending colon and can mimic cecal carcinomas [3]. The diagnostic approach of ileocecal masses includes ruling out other infectious and noninfectious causes. It usually manifests with lower gastrointestinal bleeding or bowel obstruction. Here we present the case of a 28-year-old male with diffuse abdominal pain and distension and no blood in stools with severe respiratory distress. A cecal mass without any bowel obstruction was noted which when removed resulted in his complete recovery.

Case Report

28 years gentleman was admitted in the emergency department with complaints of abdominal pain for 4 days duration. The pain was diffuse and gradually progressing in intensity. He also had complaints of vomiting and abdomen distension associated with fever with chills and rigor. He had diarrhoea about 10 episodes per day. He did not have history of melena or bleeding per rectum. There was no history of loss of weight or appetite. He did not have any comorbid illness or any previous abdominal surgeries. He was a non alcoholic and non smoker. On examination he was conscious, oriented, afebrile and was neither anemic nor icteric. His pulse was 82/minute, respiratory rate was 38/minute. His Oxygen saturation was 94 % with non invasive mask ventilation and 78 % in room air. He was tachypneic and was put on intermittent mask ventilation. His cardiovascular system and neurological examination were normal. His abdomen was soft, distended with diffuse tenderness. There was no guarding, rigidity, organomegaly and any appreciable mass owing to the presence of gross ascites. Digital rectal examination did not reveal any positive findings.

Patient was transferred to Intensive care unit for further observation and management since he had respiratory discomfort. His laboratory investigations revealed normal haemoglobin (Hemoglobin - 14 gm %), an elevated white blood cell count with normal absolute eosinophil count (WBC count: 14000/cu.mm) and a normal liver function tests. Serum amylase
value was 27 units per litre. Ascitic fluid Adenosine deaminase value was normal (12.3 units/litre). C reactive protein was positive with a serum procalcitonin value of 4.74.

A bedside ultrasonogram of the abdomen showed gross ascites with a conglomerate bowel mass noted in region of right iliac fossa which was appearing like a cocoon. Rest of the solid and hollow viscus was normal (Figure 1A & 1B). A contrast enhanced computed tomography of the abdomen revealed a diffuse wall thickening of caecum, ascending colon and proximal transverse colon which was suggestive of a malignant mass[Figure 2]. There were no dilated bowel loops or free air. In the absence of features of any surgical emergency his expectant line of management continued in the ICU. He was on injection metronidazole and ceftriaxone which were started since three days at the hospital where he was treated before referral. Ceftriaxone was replaced with Meropenam when the sepsis failed to settle. Underwent frequent paracentesis to relieve abdominal distension and respiratory discomfort, but his saturation failed to improve in room air.

![Figure 1](image1.png)

**Figure 1:** (1A): Ultrasound abdomen showing a conglomerate bowel mass noted in right iliac fossa which appears like cocoon. (1B): Clear free fluid seen in abdomen approximately 3 liters.

![Figure 2](image2.png)

**Figure 2:** Contrast enhanced Computed Tomography of abdomen showing diffuse wall thickening of caecum, ascending colon and proximal transverse colon s/o malignancy/infection. As cited.

Since patient’s general condition did not improve inspite of broad spectrum antibiotics and other supportive measures he was taken up for diagnostic laparoscopy. And the diagnostic laparoscopy revealed ascitic fluid of about 3.5 litres of straw color fluid which was aspirated. Alobulated caecal mass (Figure 3) with multiple mesenteric lymphadenopathy was seen. Liver, pelvis and peritoneum were normal. Hence converted to open laparotomy and a Right hemicolectomy was done with ileostomy and mucus fistula. He was extubated on second post operative day after his respiratory parameters normalized. Total white blood cell counts and other parameters of sepsis started to decline and eventually reached baseline values. Patient was shifted out of ICU on post operative day 7 and was discharged home in the second week.
Histopathological examination of the specimen revealed gangrenous colitis with non specific chronic inflammatory infiltrate of lymphoplasma cells, eosinophils and neutrophils in the edematous fibrous lamina propria. However aggregations of amoeba trophozoites were not demonstrated by periodic acid-Schiff stain. Since the patient had already received one week of metronidazole prior to surgery this absence of amoebic trophozoite was reasoned.

Discussion

Entamoeba histolytica infection is found to be common in people living in endemic regions such as India, Africa and parts of Central and South America. This risk applies even to immigrants from or travellers to these endemic regions. Amoebic colitis is also seen in malnourished individuals, infants, elderly and pregnant women who are at increased risk for fulminant colitis. About 55% of all patients who present extracolonic amebiasis also present ulcers in the region of the ileocecal valve which are the precursors to masses. Antigen detection assays, are the best current means for diagnosing intestinal amebiasis. These tests are sensitive, specific, rapid, easy to perform and helpful to distinguish E. histolytica from E. dispar infections. Stool specimens for microscopy are far less sensitive than antigen detection and cannot differentiate between species [4].

Ameboma is a mass of granulation tissue with peripheral fibrosis and a core of inflammation related to amebic chronic infection usually found in the cecum and ascending colon. The major complications of ameboma include perforation, obstruction, intussusception, anorectal fistula and appendicitis [5]. It may mimic colon carcinoma, Crohn’s disease, Non-Hodgkin’s lymphoma, tuberculosis, fungal infection, AIDS-associated lymphoma and Kaposi’s sarcoma in colonoscopy findings. The therapeutic strategy should be combined with antibiotics for invasive dysentery and eradication of luminal cysts [6]. Metronidazole both eliminates the invading trophozoites and eradicates intestinal carriage of the organism. The cure rate is approximately 90% [7]. Treatment with metronidazole for a week can result in diminishing of trophozoites in blood and tissue specimens [8]. Alternative drugs include tinidazole, ornidazole and nitazoxanide [9].

About 1.5% of all amebiasis infections result in amebomas, with majority of these lesions being detected incidental during laparotomies [10]. Amebomas are due to repeated episodes of untreated or partially treated amebic colitis. It is necessary to stress that this entity should be medically treated with tissue and luminal agents before considering surgery in cases where there is strong suspicion of ameboma. For this it is of vital importance to take a good clinical history, good diagnostic approach and a suitable interpretation of endoscopic and radiologic images against clinical background.

Conclusion

Ameboma, often confused with a neoplastic lesion should be considered in the differential diagnosis of submucosal tumors.
in the colon, especially in patients with an insidious onset of disease in endemic regions. Amebomas are due to repeated episodes of untreated or partially treated amebic colitis which emphasizes the importance of adequate and timely treatment with imidazoles. Even in the absence of surgical emergencies like obstruction or perforation, surgical resection could be helpful under these circumstances where it can serve to eliminate the source of sepsis.

References