SAGE Open Medical Case Reports
Volume 12: 1–3

DOI: 10.1177/2050313X241235835
journals.sagepub.com/home/sco
Sage

Amoebic colitis-A diagnostic challenge on endoscopy: Case report

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Abstract

Amoebic colitis remains a diagnostic challenge on colonoscopy given that its features resemble that of inflammatory bowel disease. We describe a similar case of a 66 years old male patient with multiple comorbidities including morbid obesity, end-stage renal disease requiring haemodialysis, IHD with PCI, T2DM, HTN and new onset dry cough for which he received a short course of steroids. He presented to the colorectal clinic with bleeding and mucus discharge per-rectum with no other symptoms related to bowel and non-specific colonoscopy findings with amoebic colitis only confirmed on histological diagnosis. The patient was commenced on a course of Metronidazole and followed up on first and sixth month after treatment where he remained well and reported no further symptoms.

Keywords

Amoebic colitis, amoebiasis, inflammatory bowel disease

Date received: 18 November 2023; accepted: 12 February 2024

Introduction

Intestinal parasitic infections still constitute a significant medical load in developing countries where hygiene and poor sanitary conditions add on to the burden. Among them amoebiasis is caused by a protozoan Entamoeba Histolytica that is a common cause of diarrhoea and dysentery in low socio-economic countries and an emerging cause of sexually transmitted infection in some developed countries.[1] It has an estimated worldwide prevalence of 50 million cases of symptomatic disease, responsible for 40000–110000 deaths annually and is the third leading parasitic cause of death worldwide.[2] It follows an oral-faecal route of transmission; sexual transmission through anal oral contact is also reported. In about 90% of the cases the infection is self-limiting and asymptomatic. In less than 1% of the cases there is an extra intestinal spread of the disease with involvement of other organs among which are liver, brain, and lungs.[1] In this report, we describe a case of amoebic colitis with atypical clinical presentation and non-specific endoscopy findings.

Case report

A 66 years old male, non-smoker with multiple comorbidities including morbid obesity, end-stage renal disease requiring haemodialysis, IHD with PCI, T2DM, HTN and new onset dry cough for which he received a short course of steroids, presented to the colorectal clinic with a history of fresh bleeding and mucus discharge per rectum for a couple of months that had worsened over the past few days. He reported no change in his bowel habits, abdominal pain or weight loss.

Abdominal examination was unremarkable, PR/proctoscopy revealed grade 2 haemorrhoids not actively bleeding. Routine full blood count showed stable haemoglobin levels. A stool examination was not performed in this case as the patient presented with bleeding and mucus discharge per rectum with no associated change in his bowel habits. With his presentation and considering his age to rule out any sinister pathology he was offered a CT abdomen and pelvis that showed diffuse proctocolitis and chronic cholelithiasis. A flexible sigmoidoscopy revealed multiple 3–5 mm ulcers in the rectum seen in quadrantic fashion with stigmata of bleeding. The rectal mucosa in between these ulcers appeared normal. Colonic mucosa from distal sigmoid and proximally also appeared normal (Figure 1). Multiple biopsies were taken.

The endoscopic imaging had a rather unusual non-characteristic pattern of ulceration in the rectum.

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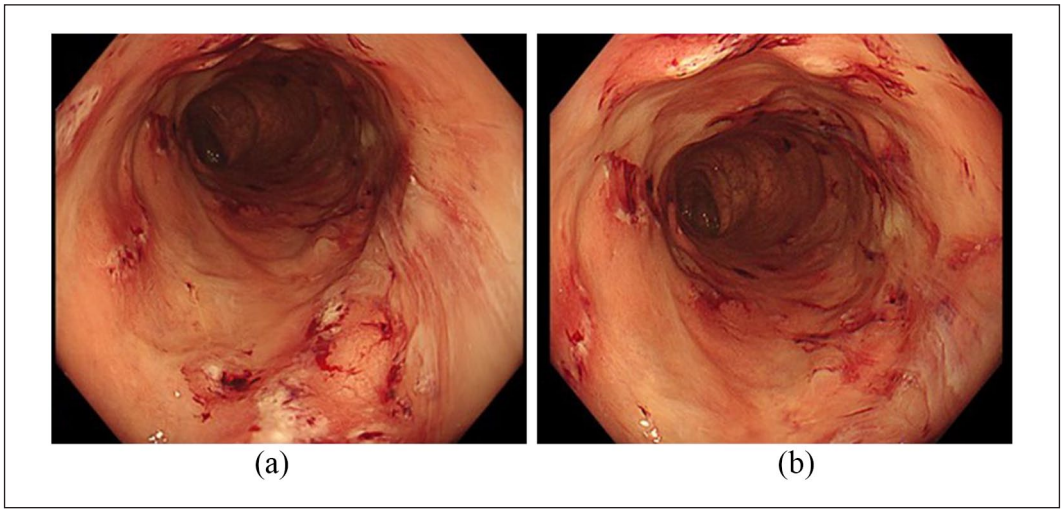

Figure 1. (a) and (b) Multiple 3–5 mm ulcers in the rectum arranged in quadrantic fashion with stigmata of bleeding.

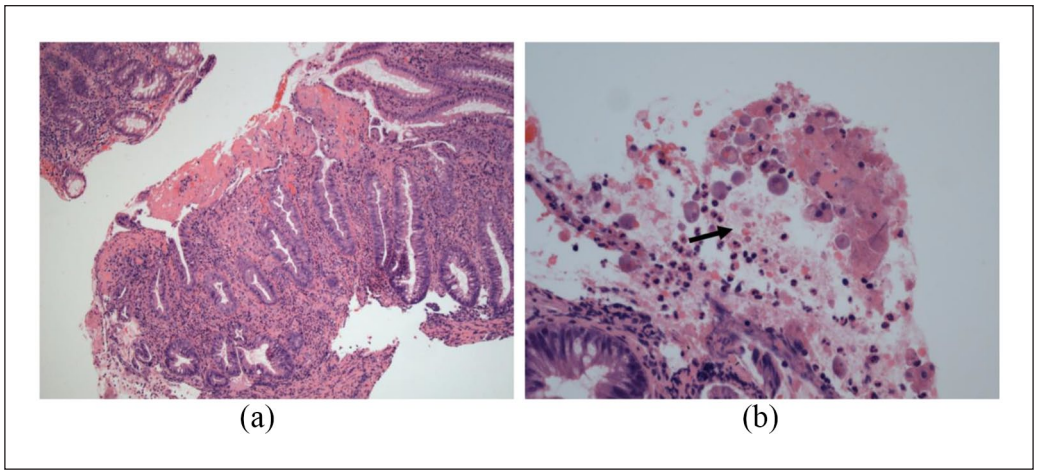

Figure 2. (a) Inflamed biopsy of rectal mucosa with erosive inflammation (H&E, ×100). (b) Within the fibrous exudate there are amoebic trophozoites, some with ingested red blood cells (arrow) (H&E, ×400).

Histological findings on PAS (Periodic acid-Schiff) staining revealed features of amoebic proctitis.

The rectal mucosa submitted showed a moderate mixed inflammatory cell infiltrate in the lamina propria with overlying erosive inflammation. Associated with the fibrin on the surface of the mucosa there were occasional amoebic trophozoites, some with ingested red blood cells within their cytoplasm (Figure 2). The trophozoites were PAS positive and negative for CD68 on immunohistochemical analysis.

The patient was commenced on a course of Metronidazole and followed up on first and sixth month after treatment where he remained well and reported no further symptoms.

An informed written consent was obtained from the patient for their anonymized information to be published prior to writing the case report.

Discussion

Amoebiasis remains to date a rare diagnosis in most developed countries including the UK, more commonly presenting in patients with a travel history to endemic areas including Central and South America, Africa, and Asia.[1] Clinical presentation ranges from diarrhoea, dysentery, generalized abdominal pain, right upper quadrant pain to fulminant necrotizing colitis, bowel obstruction, bowel perforation and peritonitis.

Amoebic colitis can involve any part of the bowel, but the most common areas involved are the caecum and ascending colon. The amoebic ulcers vary in size from a few millimetres to centimetres, with exudate and normal intervening mucosa.[3,4] A study done in 2019 showed that the amoebic rectal lesions in 55% of the cases were non-specific on

endoscopic findings.[5] IBD (Inflammatory bowel disease) can have a wide range of characteristic endoscopic findings from mucosal oedema and friability to ulceration (longitudinal or aphthous). The endoscopic features of amoebic colitis may resemble that of inflammatory bowel disease making the risk of misdiagnosis quite high.

A retrospect study done on 16 patients at Beijing Friendship Hospital from January 2015 to January 2020 showed the characteristic endoscopic findings included irregular-shaped ulcers and erosions with surrounding erythema, covered by the white or yellow exudates. It was noted that the caecum and rectum were involved in 68.75% of the cases. Furthermore, the study revealed that bloody exudate was more severe in rectal lesions as compared to those involving the caecum.[6]

In a systematic review published in June 2016 it was noted that 40% of the patients that developed fulminant colitis with amoebiasis had no gastrointestinal symptoms prior to initiation of corticosteroid therapy, which in majority of the cases was initiated due to misdiagnosis of IBD.[7] The case reported here received a short course of steroids for dry cough prior to developing PR bleeding for which he presented to the colorectal clinic. It could not be ruled out if he was an asymptomatic carrier and became symptomatic after the use of steroids. He reported no travel history. The timely diagnosis of amoebiasis remains imminent before initiation of steroid therapy in patients with endoscopic findings resembling that of IBD to avoid fatal complications like fulminant colitis.

The risk of outbreaks in community remains another challenge with faecal oral contamination. And with the fact that only one class of drug is used to treat the disease with the potential development of resistance in future make it worthwhile to have a correct timely diagnosis and full course of treatment.[8]

Conclusion

Clinical and endoscopic features of amoebic colitis resemble that of inflammatory bowel disease, which remains to be of great clinical concern. It is wise to start with less invasive investigations like stool microscopy or PCR (Polymerase chain reaction) and serum antibody testing depending on patient's presentation. Where colonoscopy is used to investigate the symptoms it is wise to wait for the histological diagnosis prior to commencing steroid therapy where IBD is the main differential in order to avoid any lethal complications.

Acknowledgements

Not applicable.

Authors contribution

Mr Raman coined the idea of writing the case report on amoebic colitis, having seen this patient in his clinic with the presentation that could easily be mistaken for IBD or bowel cancer, and colonoscopy findings that resembled that of IBD. He helped with the whole process of writing the case report, how it is constructed and the main areas to highlight.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship, and/or publication of this article.

Ethics approval

Our institution does not require ethical approval for reporting individual cases report.

Informed consent

Written informed consent was obtained from the patient(s) for their anonymized information to be published in this article.

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