



ENTAMOEBA HISTOLYTICA: ANOTHER CAUSE OF CROHN'S DISEASE

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1. INTRODUCTION

The etiology of Crohn's Disease is still unknown. Several identified pathogens are capable of causing intestinal inflammation clinically and endoscopically indistinguishable from Inflammatory Bowel Disease. Known causative agents of Crohn's Disease (CD) include *Mycobacterium avium paratuberculosis* (MAP), with 92% of CD patients carrying MAP¹; and *Mycobacterium tuberculosis*. We report on two cases of *Entamoeba histolytica* infection with a 'classic' CD appearance and complete resolution of disease following therapy.

2. CASE ONE

A 60 year old male presented to the Centre with a twelve month history of abdominal pain, fatigue and bloody diarrhea post-travel to Indonesia. Stool was negative for pathogens. The colonoscopy revealed inflammation with erosions, micro-ulcers and contact bleeding distally; and large ulcers, haustration destruction and scarring in the ascending colon (Photos A-C). Histopathology showed moderate crypt distortion with focal cryptitis. The terminal ileal biopsy showed moderate active ileitis.

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CONFLICT OF INTEREST STATEMENT
T J Borody has a pecuniary interest in the Centre for Digestive Diseases.

CASE ONE

Oval foamy structures containing red blood cells were strongly positive on PAS stain for amebiasis. The patient was treated with an antibiotic combination and showed a remarkable improvement, passing 2-3 semi-formed stools daily with no bleeding or urgency. Repeat colonoscopy revealed a normal mucosa with no evidence of ulceration or scarring (Photo D), confirmed on histology. No enteric pathogens were isolated in stool.



A. Before-Large ulcerations in the caecum.

B. Before-Ulcerations in the caecum.

C. Before -Extensive ulcerations causing haustration destruction.

D. After (Ascending colon)- Normal mucosa post-treatment.

3. CASE TWO

A 47 year old male presented to the Centre with a three month history of 10 diarrheal stools daily, weight loss of 3-4kgs, abdominal pain, fecal urgency and mucous. Three years prior he was treated for amebiasis with deep ulcerations from the distal transverse to the proximal ascending colon, similar to CD. Parasite eradication was confirmed via a negative stool result, the symptoms resolved. The illness 'relapsed' with rectal inflammation, pseudopolyps (Photo E), and large ulcerations in the ascending colon and caecum (Photo F). Stool was negative for parasites. PAS stain revealed trophozoites of *Entamoeba histolytica*. The patient underwent anti-parasite treatment with complete resolution of symptoms, passing one formed stool daily without blood or mucus. Despite the repeat colonoscopy being performed ahead of time, the colonic mucosa was normal with the exception of scarce red spots in the rectum and receding pseudopolyps in the ascending colon (Photo G). The entire caecum was normal with complete healing of previously severe ulcerations and a return of vascular pattern (Photo H).



E. Before-Inflammatory pseudopolyps in the ascending colon.

F. Before-Large ulcers in the caecum.

G. After-Receding pseudopolyps following treatment.

H. After (Caecum)-Healed ulcers with normal vascularity.

4. DISCUSSION

Infection has always been recognised as a logical candidate in the etiology of IBD. Emerging cases demonstrating the ability of pathogens to replicate the classic endoscopic and clinical features of Crohn's Disease provide a convincing argument for their role in its etiology. In spite of this we still persist with the 'autoimmune' hypothesis. The two cases described may be an infrequent but curable cause of Crohn's Disease, however in reality a number of pathogens of the gastrointestinal tract could be similarly implicated.

The cases reported illustrate the importance of revising old lessons on the risk of accepting diagnostic labels and the importance of diligence in searching for infective etiologies in Crohn's Disease, particularly given the potential for harm when using biological agents and immunosuppressants in this disease. We have demonstrated here that *E. histolytica* must be added to the increasing list of pathogens capable of causing Crohn's Disease.

5. POINTS TO CONSIDER

- Not all Crohn's Disease is Idiopathic.
- *Entamoeba histolytica* is capable of lying dormant in the body for years.
- Histology for *Entamoeba histolytica* should be included for all patients with Crohn's Disease symptoms, irrespective of whether they are in an endemic region.

6. Reference

1. Bull, T McMinn E, Sidi-Boumedine K et al. J. Clin. Microbiol. 2003 2915-2923