An unusual case of invasive *Blastocystis hominis* infection

A 47-year-old African-American man presented with 3-week history of rectal bleeding. It had started 6 weeks previously while he was visiting Nigeria, with watery diarrhea, abdominal bloating, and pain. His symptoms had resolved without treatment within 2 weeks. Physical examination and hematological and biochemical profiles were all normal. Colonoscopy showed several large ulcers in the cecum, hepatic flexure, and transverse colon with normal surrounding mucosa (Fig. 1), and multiple small, shallow ulcers in the rectum (Fig. 2). Pathologic examination of biopsies showed exudates with necrosis, and pieces of colonic mucosa with severe acute and chronic inflammation, and focal acute cryptitis, plus multiple vacuolated and amoeboid structures (Fig. 3). Subsequent stool study with a special trichrome stain confirmed the diagnosis of *Blastocystis hominis*. He was treated with metronidazole for 10 days with symptom resolution, and no recurrence of diarrhea.

*B. hominis* is an anaerobic nonpathogenic protozoan and one of the most common stool pathogens [1]. Most infected patients are asymptomatic carriers. A presumptive diagnosis of infection is made by the presence of more than five organisms identified per high power field. The parasite, which measures about 5–40 μm, the size of a macrophage, resides in the colon and is transmitted feco-orally [2, 3]. The shallow punched-out ulcers more typical for *Entamoeba histolytica* and large ulcers of the colon have never been reported before in healthy adults [4, 5]. There is a single previously reported case of invasive *B. hominis* infection in a previously healthy 4-year-old child. Patients do not usually undergo a colonoscopic examination as the typical presenting symptom is a self-limiting watery diarrhea; therefore, it is possible that some of these immunocompetent patients could also have colonic ulcers. Though an unlikely cause, *B. hominis* is a pathogen to bear in mind when large colonic ulcers are diagnosed, especially in patients with a travel history and diarrhea.

**Acknowledgments:** This material is the result of work supported with resources and use of facilities at the John D. Dingell VAMC, Detroit, Michigan, USA.

**Endoscopy_UCTN_Code_CCL_1AD_2AZ**

**Competing interests:** None

---

**Fig. 1** A large ulcer in the cecum with fibrinopurulent exudates.

**Fig. 2** Multiple small (2–3 mm) shallow ulcers in the rectum.

**Fig. 3** Histological appearance of a biopsy taken from one of the rectal ulcers stained with periodic acid–Schiff (PAS). **a** magnification ×10. **b** *Blastocystis hominis* showing strong positive staining with PAS, magnification ×40.
References

4 Tan TC, Suresh KG. Amoeboid form of Blastocystis hominis – a detailed ultrastructural insight. Parasitol Res 2006; 99: 737–742