Symptomatic Blastocystis hominis Infection in a Pediatric Patient: a Case Report

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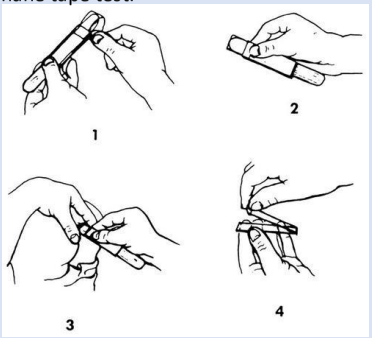
Introduction

- Blastocystis hominis are protozoa that colonize within animal GI tracts, including humans. The most common form being vacuolar seen in **(Figure 1).**
- There is debate as to whether these organisms are commensal and contribute to healthy gut flora or hold potential for pathogenic processes such as IBS or other chronic digestive disorders.
- Within the external environment, these organisms can be found worldwide but are prevalent in developing countries with poor sanitation as well as parts of Europe, Africa and the Middle East with sub/tropical climates and have been linked specifically to unpasteurized milk, contaminated water and pig farms.
- Typically, these infections are asymptomatic. However, patients that are symptomatic commonly present with diarrhea, abdominal pain, bloating, nausea/vomiting and rarely anal itching.

Figure 1. Vacuolar form (most common) of blastocystis hominis with trichrome stain at 1000x.

Figure 2. Procedure for obtaining parasite specimens directly via scotch/cellophane tape test.



Case Description

PRESENTATION

7-year-old male presents for severe anal pruritis which was worse at night.

- He denied any associated abdominal pain, diarrhea, nausea/vomiting, blood in his stool or potential new irritant exposures.

PHYSICAL EXAM

- Upon exam, there were no abnormal findings of the perianal area - no visible eggs, erythema, rash or excoriations. The patient was afebrile and otherwise healthy.

DIAGNOSIS AND TREATMENT

- He was diagnosed with pinworms and treated with OTC pyrantel pamoate.

FOLLOW UP

- Patient presented again 1 week later with unresolved symptoms despite compliance with the pyrantel pamoate. Exam findings were unchanged.
- Scotch tape test **(Figure 2)** was performed which revealed no eggs or pinworms, so a fecal sample was obtained, and an O&P panel was sent for testing.

DIAGNOSIS AND TREATMENT

- The panel resulted in moderate blastocystis hominis infection and the patient was prescribed Metronidazole for 10 days.
- Patient returned for a wellness visit 1 week later with resolution of his anal itching with compliance with his medication.

Discussion

- The most common parasitic infection associated with anal pruritis is pinworms and is treated with albendazole or pyrantel pamoate. However, this patient did not improve with treatment and was found to have blastocystis hominis infection.
- While there are some associations and varied hypotheses, the pathogenicity and role of Blastocystis in the human GI tract is still unknown and an ongoing area of research.
- However, for symptomatic patients, metronidazole has become a mainstay treatment in patients with confirmed blastocystis infections.
- Differential diagnoses regarding pediatric anal itching should be cocnsidered as blastocystis is not as common as an etiology of anal itching **(Table 1**).

Table 1. Differential diagnoses and treatment for anal itching.

	Signs and Symptoms	Treatment
Pinworms	Anal itching (worse at night)	Albendazole or pyrantel pamoate
IBS	Abdominal pain, diarrhea and/or constipation, bloating	Symptomatic: fiber, avoidance of trigger foods, regular physical activity
Contact dermatitis/pruritus ani	Perianal erythema, anal itching	Remove offending agent, dietary modification, barrier creams, antihistamines
Blastocystis	Abdominal pain, bloating, diarrhea, nausea/vomiting, anal itching	Metronidazole, tinidazole, paromomycin

References