

Symptomatic Anemia Due to Trichuriasis

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CASE REPORT

A 40-year-old woman from rural Guatemala was admitted with fatigue, light-headedness, intermittent postprandial abdominal pain, and nausea for 8 days. She was referred after an outpatient syncopal evaluation revealed a hemoglobin level of 6.1 g/dL. Recent history included hematochezia and a diagnosis of *Helicobacter pylori*, for which she started standard triple therapy a few days before presentation. Her vital signs were within normal limits. Initial bloodwork revealed iron deficiency anemia with hemoglobin 6.0 g/dL, iron 116 µg/dL, and ferritin <0.5 ng/mL, but peripheral eosinophilia was not detected. An upper endoscopy was unremarkable. On colonoscopy, a 2–3 cm long, tubular organism with a fine tail akin to a whip was noted in the cecum (Figure 1). Rare, fine movements were observed endoscopically consistent with a whipworm. Histology revealed portions of a small (female) worm containing numerous eggs with polar caps on both ends (Figure 2)—findings morphologically consistent with *Trichuris trichiura*. She was discharged on oral albendazole for 3 days; no further follow-up was documented.

Trichuriasis is the second most common geohelminth infection in humans (affecting an estimated 600–800 million people globally) endemic to parts of Asia, Africa, and Latin America.^{1,2} In the United States, where infections are rare, most cases are diagnosed in immigrants or travelers returning from tropical areas with poor sanitation except for sporadic infections reported in the rural Southeast.^{1,3} Trichuriasis is contracted through the fecal-oral route after ingesting embryonated eggs.^{1,2} Eggs hatch in the small bowel and larvae migrate to the cecum where they burrow into the crypt epithelium until maturation.^{2,5} The worm's whip-like anterior end attaches to the mucosa where it may live for up to 4 years.^{3,4} The wider posterior end may be visualized on colonoscopy wiggling and projecting into the lumen.⁴ Most infections are asymptomatic with absent or minimal eosinophilia.^{2,4} Moderate or heavy infestation may cause abdominal pain, anemia, and diarrhea.^{2,4}

The diagnosis is typically established by identifying barrel-shaped ova on stool microscopy.^{3,4} Reduced sensitivity of stool examination has been observed with low parasitic loads, male worm infestation, or female whipworms in the prepatent period when eggs may be absent.^{2,3} Direct endoscopic visualization of whipworms may establish a diagnosis, particularly if stool microscopy is negative, as in the aforementioned scenarios.^{3,5} In endemic countries, endoscopy remains the most common method for coincidental detection of trichuriasis (up to 10%).³ Oral mebendazole or albendazole is the mainstay of treatment.^{2,5}

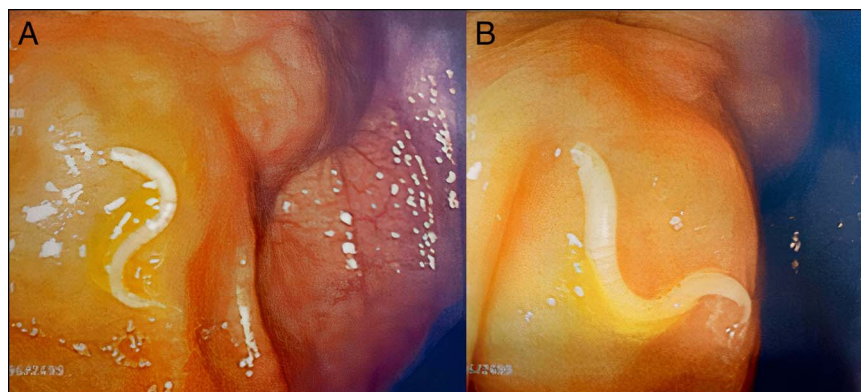


Figure 1. (A) Lower endoscopic view of the cecum revealing a long, slender whitish whipworm. (B) Endoscopic view of whipworm's thin anterior end threaded into the cecum.

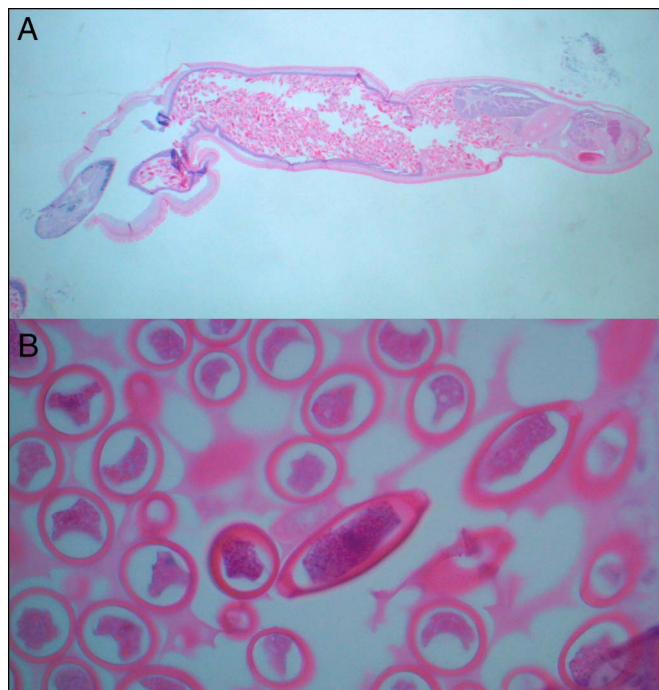


Figure 2. (A) Pathology slide with a section of *Trichuris trichiura*. (B) Pathology slide with magnified *T. trichiura* eggs.

DISCLOSURES

Author contributions: J. Aponte-Pieras revised the article for intellectual content, approved the final article, and is the article guarantor. S. Mesgun wrote the article and reviewed the

literature. A. Hong, T. Farooqui, Y. Elmofti, D. Lankarani, and H. Aziz edited and revised the article for intellectual content. J. Ono and B. Saud provided the images.

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Informed consent could not be obtained from the patient despite several attempts. All identifying information has been removed from this case report to protect patient privacy.

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