Colitis due to Ancylostoma duodenale

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The larva of hookworm matures into the adult stage in the small intestine, causing chronic intestinal blood loss and iron-deficiency anemia. Hookworm infestation of colon has not been reported previously. We report a 35-year-old man who presented with diarrhea with blood and mucus in stools. Colonoscopy revealed several hookworms in the colon firmly adherent to the mucosa, with oozing of blood and surrounding mucosal erosions. He was treated with mebendazole and symptoms recovered completely. [Indian J Gastroenterol 2006;25:210-211]

Hookworm infestation can cause abdominal pain, flatulence and diarrhea, but the hallmark of chronic hookworm disease is iron-deficiency anemia as a consequence of chronic intestinal blood loss. The larval forms become sexually mature adult worms in the small intestine. Location outside the small intestine is exceptional.

A 35-year-old farmer presented with intermittent episodes of diarrhea with blood and mucus since 2 months. He also had lower abdominal crampy pain prior to defecation. There were no other gastrointestinal or systemic symptoms. Past and family history was non-contributory. Physical examination was unremarkable except for pale conjunctiva.

Investigations: hemoglobin 8.2 g/dL; mean corpuscular volume 64.1 fL (normal 78.0-100.0), white cell count 5.5×10^9/L (4.5-9.2) with 7% eosinophils, platelet count 293,000/µL (157,000-350,000). Peripheral smear showed hypochromic, microcytic anemia. Serology for HIV was negative. Other biochemistry tests including liver and renal function tests were normal. Stool occult blood test was positive while microscopic examination of stool was negative for parasite ova, cysts and trophozoites. Stool culture showed no pathogen. Abdominal ultrasonography and upper GI endoscopy were normal. Sigmoidoscopy and colonoscopy showed several small slender reddish worms in the descending, transverse and ascending colon (Fig). The terminal ileum was normal. Several worms were seen feeding on the intestinal mucosa and multiple mucosal erosions with slow oozing of blood were noted. The tip of the worms was firmly anchored to the mucosa and some worms were removed with biopsy forceps. Microscopic examination disclosed male hookworm – Ancylostoma duodenale. Biopsy from the colon showed inflammatory infiltrate with eosinophils.

The patient was treated with mebendazole and hematinics. Two months later, hemoglobin was 11.4 g/dL and he had no further intestinal bleeding. Repeat
Colonoscopy was normal.

Hookworms develop into adults in the small intestine and anchor themselves to the mucosa. Very rarely they have been recovered from the gastric antrum and cecum. The ectopic localization in the antrum has been attributed to jejuno-duodeno-gastric reflux. The recovery of hookworms from the cecum has been attributed to bowel preparation that may have washed the worms downstream. In our patient the duodenum and ileum were normal and worms were seen on initial sigmoidoscopy itself. Moreover the hookworms were seen anchored to the mucosa with evidence of oozing of blood from punctate erosions in the colon. To the best of our knowledge this is the first report of symptomatic hookworm infestation of the colon.

Unusual cases of hookworm infection of proximal jejunum causing intestinal bleeding diagnosed by enteroscopy have been reported. Recently the dog hookworm *Ancylostoma caninum* has been found in adult form in the human small intestine and has been implicated in cases of eosinophilic enteritis.

Diagnosis of hookworm infection relies on the identification of ova in the feces but differentiation between species based on morphology of ova is extremely difficult. In some instances of infestation by male hookworms only, stool examination will be negative for ova. As colonoscopy is indicated in most patients with iron-deficiency anemia and positive stool occult blood test, the physician who performs endoscopies on patients from endemic regions should recognize these helminths.

References


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Laparoscopic control of spontaneous external hemorrhage from umbilical varix

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Spontaneous external hemorrhage from an umbilical varix is rare. We describe a 40-year-old man with cirrhosis and portal hypertension, who presented with recurrent external bleeding from an umbilical varix. The first episode was controlled by transfixation of the vein under local anesthesia. Contrast-enhanced CT scan demonstrated a hugely distended recanalized umbilical vein arising from the left branch of the portal vein and ending in the umbilical cicatrix. Recurrent bleeding necessitated laparoscopy and *in-situ* clipping of the bleeding vein in the falciform ligament. At six months' follow up the patient has no further bleeding. [*Indian J Gastroenterol* 2006;25:211-212]

Symptomatic ectopic varices in portal hypertension are unusual. The detection of a recanalized umbilical vein has been an incidental ultrasound finding in these patients. External hemorrhage from rupture of an umbilical varix is rare. The two cases reported in literature were managed by excophalectomy.

A 40-year-old man presented to the emergency medical services with massive hemorrhage from his umbilicus following trivial blunt trauma to the abdomen when he slipped and fell. He was a chronic alcoholic, receiving treatment for diabetes mellitus and essential hypertension for the past 3 years. On examination, he was pale, anicteric, with blood pressure 90/60 mmHg and pulse rate 110/min. There was active bleeding from an umbilical varix. There was no visible caput medusae or periumbilical venous hum. The spleen was enlarged and there was no ascites. The patient was resuscitated and the umbilicus was explored under local anesthesia and a dilated umbilical vein was isolated and transfixed with silk sutures.

**Investigations:** Hemoglobin 7.5 g/dL, total leukocyte count 3,200/mm³, platelet count 59,000/mm³, blood sugar

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