

A Case of Filariasis Reported from Southern Iran

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ABSTRACT

A 56 year-old man with recurrent gastrointestinal bleeding is reported. The patient had constant crampy pain in his epigastrium, right upper quadrant and periumbilical area. Upper-gastrointestinal endoscopy was normal. Colonoscopy showed a soft-tissue mucosal lesion in the rectum which was determined to be a worm that extended into the lumen of the rectum with no bleeding. The pathology was microfilaria in the rectal glands. Filariasis should be taken into consideration in the differential diagnosis of recurrent gastrointestinal bleeding conditions in our area.

KEYWORDS

Gastrointestinal bleeding; Filariasis; Microfilaria; Proctitis

INTRODUCTION

Filariae are nematodes that live as adults in various human tissues. These agents cause various clinical syndromes. They are a major cause of disfigurement and disability in endemic areas, leading to significant economic and psychosocial impact. Herein we reported a case of filariasis with recurrent gastrointestinal bleeding and peripheral edema.

CASE REPORT

A 56 year-old man was admitted to the hospital for evaluation of recurrent gastrointestinal bleeding and peripheral edema. He had been well until 12 months earlier, when he had mid-epigastric pain and passed black-red stools that were positive for occult blood. He was anemic and admitted to the hospital for evaluation. The patient had

nearly constant crampy, non-radiating pain in his epigastrium, right upper quadrant, and periumbilical area; the pain was exacerbated by eating and accompanied by nausea. He also began to have intermittent loose bloody stools without frequent or voluminous diarrhea. The patient developed right leg edema which extended up to the knee and was accompanied by two distinct ulcers.

He was born and raised in Imam Port in Khuzestan Province. The patient was employed as a shopkeeper. His past medical history was unremarkable. There was no history of chest pain, headache, nausea or vomiting. At the time of admission, the temperature was 37°C, pulse was 82 beats per minute, respiratory rate was 14 breaths per minute and he had a blood pressure of 110/80 mm Hg.

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The patient weighed 82 kg. Physical examination revealed no abnormalities except for right leg edema which extended up to the knee and was accompanied by two distinct ulcers (Figures 1 and 2). Left leg was normal.



Fig. 1: Right leg edema accompanied by two distinct ulcers.



Fig. 2: Right leg edema and ulcer containing a worm.

No rash or lymphadenopathy were noted. There was no evidence of ascitic fluid. The results of the rectal examination were unremarkable. The levels of serum electrolytes, amylase and lipase were normal, as were the results of urinalysis and liver function studies. Other laboratory data are shown in Table 1. A stool specimen was black but not tarry and positive for occult blood. Stool cultures were negative for enteric pathogens, protozoa and helminths.

Microscopic examination of the stool disclosed an excessive number of undigested muscle fibers and abundant yeasts; no protozoa

or helminthic ova were found. Upper-gastrointestinal endoscopy showed a normal esophagus, striped erythematous mucosa in the distal esophagus consistent with reflux esophagitis, a normal duodenum and normal stomach.

Colonoscopy showed a soft-tissue mucosal lesion in the rectum which was determined to be a worm that extended into the lumen of the rectum with no bleeding (Figures 3 and 4).

Table 1: Laboratory data.

Hb (gr/dL)	12.8 (13.5-16.5)
MCV (fl)	82.4 (80-100)
Platelets (μ L)	165000 (150000-450000)
ALT (IU/L)	52 (9-40)
AST (IU/L)	64 (10-35)
ALP (IU/L)	92 (30-120)
ESR (mm/h)	20 (<20)

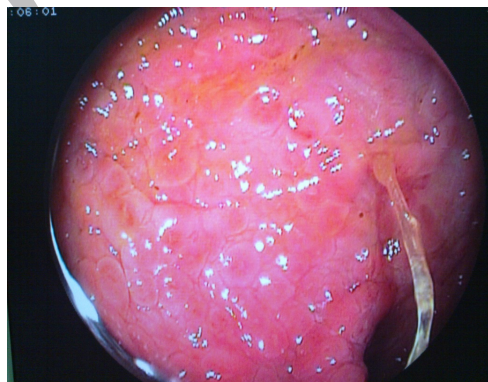


Fig. 3: A worm extending into the lumen of the rectum.



Fig. 4: The site of extraction of the worm from the mucosa with oozing.

After extraction of the worm from the mucosa and biopsy specimen obtaining the pathology was positive for inflammatory infiltration of an intermediate density in the rectum with nonviable microfilaria in the rectal glands. The species of the microfilaria could not be exactly identified, but was probably *W. bancrofti*. Upon detailed questioning of the patient's relatives, it was undetermined whether the patient had been outside of Iran in recent years.

The patient remained hemodynamically stable with no further gastrointestinal bleeding.

Chest radiographs revealed bilateral prominence of interstitial markings. An ultrasonographic examination of the abdomen showed a normal texture liver and that the intrahepatic ducts and common bile duct were of normal diameter. The gallbladder was partially collapsed; the pancreas appeared normal.

A two week course of albedazole was prescribed. During the first 48 hours after medication, the patient reported improvement and his right leg edema disappeared.

DISCUSSION

Filariae are nematodes that live as adults in various human tissues. They do not lay eggs, but constantly produce enormous numbers of larvae (microfilariae) in humans. These are found in the skin or blood. Human-to-human transmission occurs via insects: the parasites are thus "arthropod-borne". Animal reservoirs play no role of significance in most places, except in subperiodic *Brugia malayi*.

Filarial diseases are a major health problem in many tropical and subtropical areas. The disease produced by a filarial worm depends on the tissue location preferred by adults and microfilariae. The adults of the lymphatic filariae inhabit lymph vessels, where blockage and host reaction can result in lymphatic inflammation and dysfunction, and eventually in lymphedema and fibrosis. Other filariae mature in the skin and subcutaneous tissues, where they induce nodule formation and

dermatitis; migrating filariae of these species can cause ocular damage.

In this case presentation, the patient presented with recurrent gastrointestinal bleeding and peripheral lower extremity edema. Parasitic infestation involving the gastrointestinal system is very rare. As with most helminth infections, the adult parasite does not replicate within the human host.

Thus, the adult worm burden (as opposed to the microfilarial burden) cannot increase once an individual is no longer exposed to infective larvae, such as after leaving an endemic region. Since mosquito vectors are not efficient transmitters of filariasis, a relatively prolonged stay in an endemic area is usually required for the acquisition of infection. It is unclear that the patient had been outside Iran. Travelers and expatriates do not usually have sufficient exposure to filariasis to develop the chronic complications of infection that are seen with high worm burdens. Rather, these individuals can demonstrate an allergic-type reaction to developing larvae that rarely occurs in endemic persons.

This is the first case of filariasis reported in a patient with recurrent gastrointestinal bleeding. In the literature there are only a few filariasis cases diagnosed via gastrointestinal cytology.^{1,2} An allergic proctitis due to microfilaria may have caused the ulceration and bleeding in our case. Even rare, parasitic diseases should be taken into consideration in the differential diagnosis of recurrent gastrointestinal bleeding conditions in our area.

CONFLICT OF INTEREST

The authors declare no conflict of interest related to this work.

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