

Worms in the Urine Signaling Disseminated Strongyloidiasis

Herbert L. Fred, Niraj N. Mehta, Luciano B. Lemos

S*trongyloides stercoralis* is an intestinal nematode that infects a large portion of the world's population. Finding the tell-tale larvae in the stool establishes the diagnosis. When the infection is confined to the alimentary tract, many patients remain asymptomatic, while others suffer intermittent diarrhea. If, however, the patient becomes immunosuppressed, the larval stage of the parasite can invade the intestinal mucosa and spread hematogenously throughout the body.

The antemortem diagnosis of disseminated strongyloidiasis can be difficult, not only because the symptoms and signs vary considerably, but also because the index of suspicion for the disease typically is low. Consequently, the disseminated form often goes unrecognized until autopsy. Sometimes, however, the larvae are discovered unexpectedly in specimens obtained for other purposes, e.g. sputum; tracheo-bronchial and duodenal aspirates; pleural, peritoneal, and spinal fluid; and histologic sections of skin, appendix, lymph nodes, cutaneous cysts, and gastric ulcer (1,2). The following case calls attention to another unusual source—the urine:

A 53-year-old woman from Mexico entered the hospital for evaluation of a 50-lb weight loss and non-productive cough of several months' duration. She had a 5-year history of intermittent diarrhea and a newly diagnosed hemolytic anemia for which she was taking large doses of corticosteroids. Just before admission, she had undergone colonoscopy which showed crypt abscesses suspicious for inflammatory bowel disease. On physical examination, she appeared pale and wasted and had edema of her lower extremities. Blood studies disclosed anemia, eosinophilia, and hypoalbuminemia. Chest film showed tiny, reticulo-nodular densities throughout both lungs. Urinalysis demonstrated free-swimming worms, later identified as larvae of *Strongyloides stercoralis* (Figure 1). Subsequent

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Figure 1. Urine sediment showing a larva of *Strongyloides stercoralis* and epithelial cells. (Papanicolaou's stain, original magnification $\times 600$)

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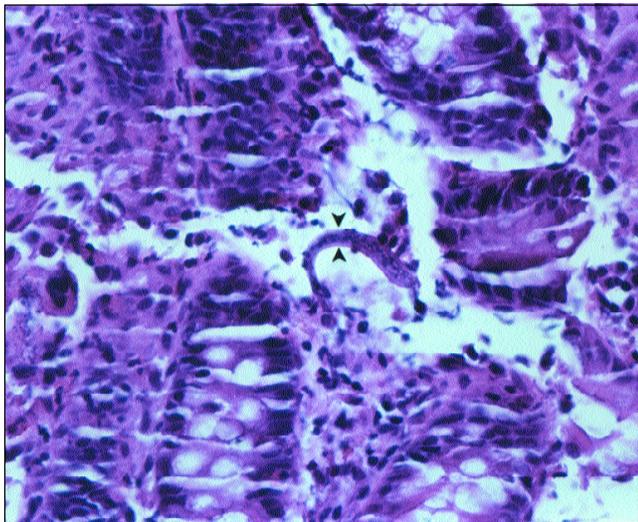


Figure 2. Colonic mucosa containing a larva (arrowheads) of *Strongyloides stercoralis*. (Hematoxylin-eosin, original magnification $\times 600$)

quent examination of her stools and re-examination of the crypt abscesses (Figure 2) uncovered similar larvae. With thiabendazole therapy, her diarrhea ceased, her cough and pulmonary infiltrates disappeared, and her edema resolved.

COMMENT

Finding larvae in the urine of patients with disseminated strongyloidiasis is rare (3–6). Nevertheless, the serendipitous discovery of larvae in the initial urine sample from our patient prevented what could have become a baffling clinical problem with a fatal outcome. ■

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