

IMAGES IN CLINICAL MEDICINE

Strongyloides stercoralis Hyperinfection

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A 46-YEAR-OLD MAN WITH RAYNAUD'S DISEASE WHO EMIGRATED FROM CAMBODIA 30 YEARS AGO PRESENTED with a 2-month history of myalgias, exertional dyspnea, and an elevated level of creatine kinase. An extensive evaluation was notable for the ground-glass infiltrates detected in the lower lobes on a computed tomographic scan of the thorax. Serologic tests and bronchoalveolar lavage were unrevealing. A specimen from a muscle biopsy showed necrotizing myopathy. Empirical therapy with oral corticosteroids was begun for treatment of an inflammatory condition that was presumed to be noninfectious. Four weeks after therapy was initiated, the muscle weakness and dyspnea were worse and there was progression of the pulmonary infiltrates. While the patient was waiting to undergo an open-lung biopsy, pulmonary hemorrhage, hypoxemic respiratory failure, and fulminant septic shock with *Escherichia coli* occurred. Many larvae of *Strongyloides stercoralis* were identified in an endotracheal aspirate (see the worm, with red blood cells; also see the video). Despite treatment with ivermectin and albendazole and therapy for septic shock, the patient's condition deteriorated rapidly, and he died. Subclinical infection with this nematode (roundworm) may persist for decades through an autoinfection cycle in which there is low-level hematogenous migration from the gastrointestinal tract to the lungs and then, through reverse aspiration, back to the gastrointestinal tract. When a patient with latent *S. stercoralis* infection is given corticosteroid therapy, a severe, life-threatening hyperinfection syndrome may occur; this syndrome is often associated with sepsis from enteric flora (probably related to worm migration across the intestinal mucosa). As in this case, the presence of visible filariform larvae in the respiratory tract is a manifestation of disseminated infection. Patients at risk for acquiring *S. stercoralis* infection should be identified, screened, and treated, if appropriate, before corticosteroid therapy is administered.

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