

Correspondence

Linear and urticarial rash-like manifestation of acute strongyloidiasis

Strongyloides stercoralis is a nematode that has the ability to multiply within the human host. The clinical consequences of infection can range from mild or asymptomatic infection to life-threatening disseminated disease.¹

A healthy 39-year-old woman from Morocco presented at our institution with lumbar pain and fever that began 10 days after returning from a trip to her country of origin. She was on the beach, walking in sandals, and did not notice any bite or other skin symptoms. An elevation of acute phase reactants (erythrocyte sedimentation rate and C-reactive protein) and 500/mm³ eosinophils were detected, and treatment with ceftriaxone and amikacin was started. The next day, she started with an itchy rash in abdominal area, which in 2 days progressed to the thighs and was associated with transient cough. On examination the patient had serpiginous and linear weal on the abdomen, back, and thighs (Fig. 1). Eosinophils (800/mm³) were detected so, suspecting a drug rash, the antibiotic treatment was changed. Four days later, 4400/mm³ eosinophils were detected without other laboratory abnormalities. The rash remained stable, and respiratory symptoms disappeared. The patient began with colicky abdominal pain associated with loose stools, and a presumptive diagnosis of parasitosis was made with a differential diagnosis of parasitic infections, obtaining serology for *Strongyloides* and schistosomes among others, stool studies of parasites and *Strongyloides* ×3, and urine studies of schistosomes. Skin biopsy showed the presence of abundant eosinophilic dermal infiltrate, and a thoraco-abdomino-pelvic computed tomography scan was performed without modifications. A week later, the patient had 12,000/mm³ eosinophils without progression of the rash. A first study of serology for *Strongyloides* and feces was normal. A second serology 3 days after the first was positive, and detection of

Strongyloides larvae in feces (both in the second and third stool sample) was made (Fig. 2). Given the clinical and laboratory course, showing seroconversion, a diagnosis of acute strongyloidiasis was performed. Ivermectin treatment 200 µg/kg/d for 2 days was completed, with disappearance of the rash in 4 days. Two weeks later, the patient was asymptomatic and had 1000/mm³ eosinophils.

Acute infection in *Strongyloides* is poorly described based only on those made in the first half of the twentieth century in which volunteers infected themselves and made descriptions of their symptoms and course of the disease.² After these descriptions, there is no patient in the known literature that associated skin lesions in acute infection. A pruritic erythematous eruption has been described at the site of larval entry. A dry cough appears in the first 7–14 days, with abdominal fullness, and watery diarrhea alternating with constipation. Larvae are first detected in the stools within 3–4 weeks, and seroconversion occurs in the same period.^{3–5} There is a progressive increase in eosinophilia, reaching its peak at the end of acute infection, where a leukocytosis of up to $25 \times 10^9/l$ and eosinophilia of $10\text{--}12 \times 10^9/l$ can be detected.¹ When the infection is chronic, there is a moderate eosinophilia. The autoinfective cycle maintains inapparent infection in the immunocompetent host for years to decades. Most *Strongyloides* infections are detected in asymptomatic individuals, corresponding to uncomplicated chronic conditions. Dermatological manifestations include chronic urticarial lesions and larva currens in the buttocks and waistline. The latter are intensely pruritic serpiginous urticarial weals caused by filariform larval migration in the skin, which move at a rate of 5–15 cm/h.^{1,6,7} These cutaneous manifestations can occur in each autoinfective process, without descriptions to date in acute infection. In persons debilitated by disease or treated with immunosuppressives, severe and potentially fatal complications may result. Cutaneous manifestations

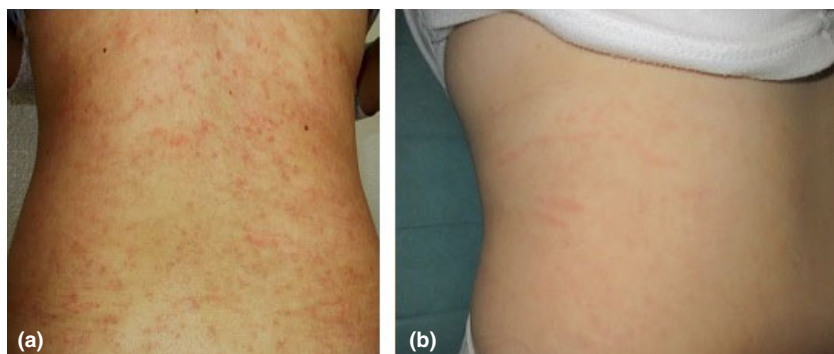


Figure 1 (a) Serpiginous and linear weals on the back. (b) Details of linear lesions in the right flank

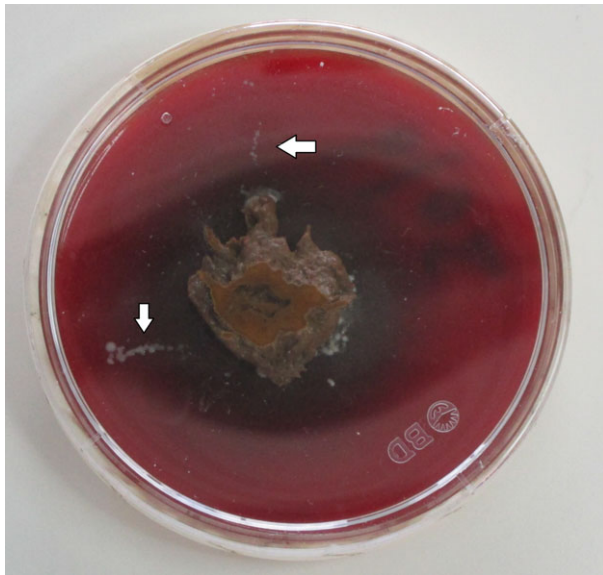


Figure 2 Stool culture on a blood agar plate. Visible tracks created as larvae carry bacteria over the agar (arrows)

of disseminated disease include petechial and purpuric eruptions on the abdomen and proximal extremities.^{7–10} We report a case of acute strongyloidiasis, clinical, analytical, and microbiologically compatible with the descriptions previously made, associated with cutaneous manifestations undescribed in this phase. It is important to keep in mind this disease because of the possibility of chronicity and long-term complications, and include it in the differential diagnosis of localized urticarial rash, particularly if associated with eosinophilia and if patients come from an endemic area.

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