

Iron-Deficiency Anemia With an Itch

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A 38-year-old woman from Thailand presented with 2-week history of an intensely pruritic eruption on the palmar aspect of her hand (Figure). She reported walking barefoot in the farm and working in soil with bare hands. She had pale conjunctivas, with an erythematous, serpiginous eruption with erythematous raised tracts on her left palm. Laboratory tests were notable for a hemoglobin level of 10 g/dL, hematocrit of 30%, and mean corpuscular volume of 75 fL. Fecal occult blood test result was positive.

The skin finding is clinically diagnostic of cutaneous larva migrans. Cutaneous larva migrans is caused by the migration of hookworm larvae through human skin. It is most often caused by the larvae of the hookworm *Ancylostoma duodenale* in Asia and *Necator americanus* in the Americas.¹ The larvae are able to penetrate through the epidermis of a host by releasing

degradative enzymes. The larvae migrate into the blood vessels from the skin and reach the lungs. In 8 to 21 days after infection, the larvae penetrate into the pulmonary alveoli, ascend the bronchial tree, and from there travel to the pharynx where they are swallowed. The worms mature in the small intestine. Hookworm is one of the most common chronic infections especially in poor rural areas in the tropics. The major clinical manifestations of hookworm disease are the consequence of chronic intestinal blood loss. Each worm is estimated to consume 0.3 to 0.5 mL of blood per day. In addition, bleeding occurs from punctate ulceration in the small bowel. The net result is that patients present with iron-deficiency anemia. Histopathological confirmation and removal of the larvae from the skin is not usually attempted because the migrating larvae are difficult to locate. Treatment with iron repletion and anthelmintic therapy with albendazole was started in this patient. One month later, the anemia and the skin lesion had resolved.



FIGURE. Erythematous, serpiginous eruption with erythematous raised tracts on the left palm of the patient.

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1. Hookworm infection. *N Engl J Med.* 2004;351:799-807.