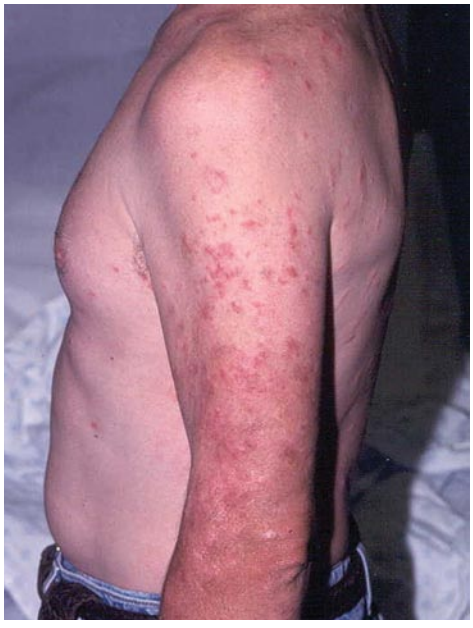
What Is Your Diagnosis?



A 35-year-old man presented with a nonspecific pruritic dermatosis of nearly 5 years' duration. Physical examination demonstrated numerous excoriated erythematous papules and nodules on the left arm and back. Previous therapy with topical and intralesional steroids, topical antipruritics, antihistamines, topical thiabendazole, and oral ivermectin were all ineffective.

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The authors report no conflict of interest.

The Diagnosis: Cutaneous Larva Migrans

Cutaneous larva migrans (CLM) occurs after direct contact with warm, moist, sandy soil infested with nematode parasites. The larvae penetrate the stratum corneum and migrate within the epidermis, leaving behind a pruritic, erythematous, serpiginous trail. Less frequently, other presentations, such as a folliculitislike rash or urticarial-like rash, have been reported.[1-3] Our patient demonstrated more of a folliculitislike rash (Figure 1). Many of these previously reported folliculitis cases had associated cutaneous tracks, which were absent in our patient. However, our patient demonstrated an epinephrine-blanched curvilinear eruption consistent with CLM at biopsy sites (Figure 2).

Histopathologic examination can help with the diagnosis of CLM if a biopsy specimen is obtained just ahead of the leading edge tract where the nematode resides in a suprabasalar burrow. An inflammatory infiltrate with many eosinophils may provide a clue to the diagnosis, but is, in itself, nondiagnostic. Our patient had undergone multiple nondiagnostic biopsies prior to the diagnostic biopsy from his left axilla, which demonstrated the parasites within the epidermis (Figure 3). The delayed diagnosis in our patient can be attributed not only to his atypical presentation and multiple nondiagnostic biopsies but also to his prolonged disease course and initial unresponsiveness to appropriate CLM therapy. Several authors have concluded that CLM with folliculitis is more resistant to specific anthelminthic drugs than classic CLM.[1-3] One report cited a cure rate of only 40% with a single dose of ivermectin compared with the usual cure rates of 81% to 100% in classic CLM.[1]

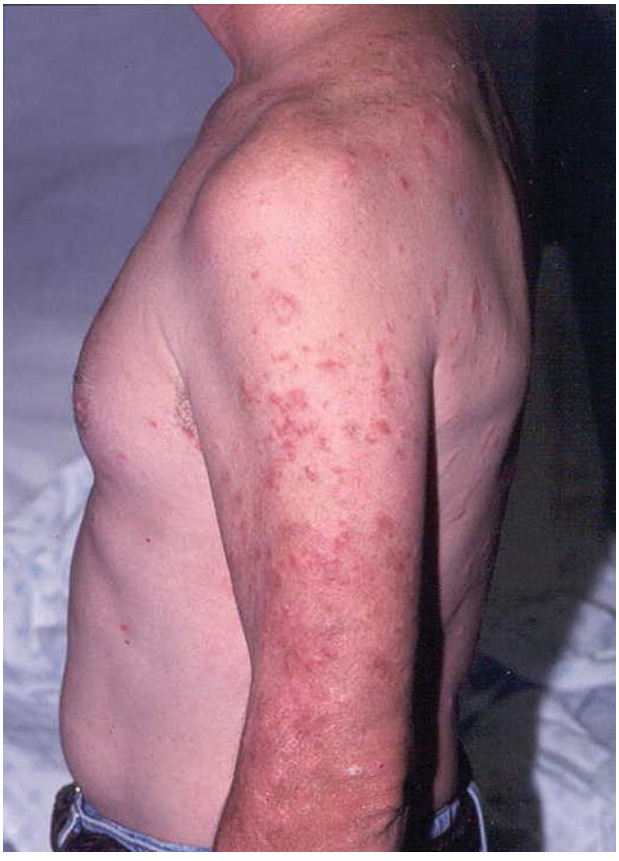

Figure 1. Numerous excoriated erythematous papules and nodules on the left arm and back.

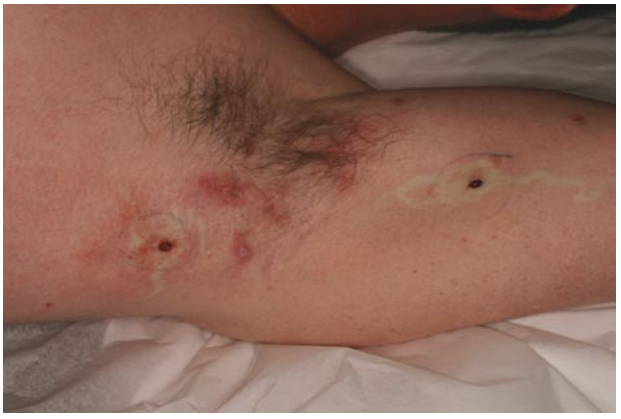

Figure 2. Epinephrine-blanched curvilinear eruption at biopsy sites.

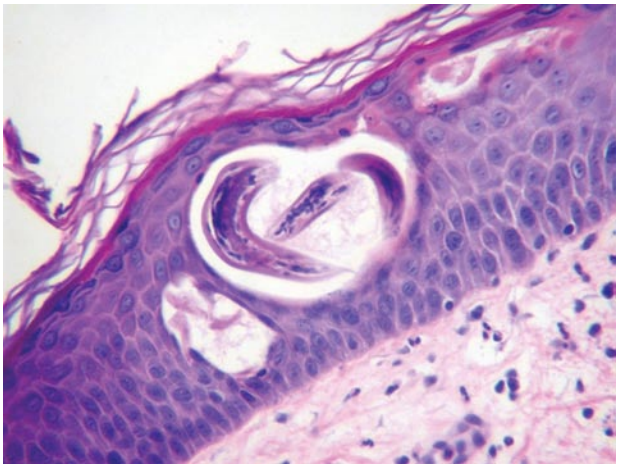

Figure 3. Diagnostic biopsy from the left axilla demonstrated parasites within the epidermis (H&E, original magnification ×40).

Ancylostoma braziliense is the most common etiologic parasite in the United States.[4] This helminth typically affects the intestines of cats and dogs, only inadvertently disturbing humans. Because the larvae lack the collagenase enzymes required to penetrate the basement membrane of human skin, they are unable to travel to the intestines and complete their life cycle. Spontaneous resolution, therefore, occurs in 4 to 8 weeks. Other etiologic parasites include *Ancylostoma caninum; Uncinaria stenocephala; Bunostomum phlebotomum;* and rarely *Ancylostoma ceylonicum, Ancylostoma tubaeforme, Necator americanus, Strongyloides papillosus, Strongyloides westeri,* and *Ancylostoma duodenale*.[4] More prolonged courses of CLM have been reported. *Strongyloides stercoralis,* which is capable of penetrating the basement membrane and completing its life cycle, may cause a chronic, cutaneous, creeping eruption that may last decades (larva currens).[5] Our patient's *Strongyloides* titers were negative. A case of persistent CLM caused by *Ancylostoma* species also has been reported[6] and may be a more likely explanation in our patient.

Unfortunately, we were unable to identify the exact species in our patient. Perhaps he was getting reinfested by the common *A braziliense,* though we believe this to be unlikely. The patient never gave a good history for exposure to this nematode, and his persistent rather than cyclical symptoms were more consistent with a persistent infection. The possibility of CLM occurring in conjunction with a different, more chronic dermatosis was considered. However, the clinical picture remained fairly constant throughout his disease course, and the patient eventually responded completely to therapy for CLM, implicating CLM as the single diagnosis.

REFERENCES

1. Caumes E, Ly F, Bricaire F. Cutaneous larva migrans with folliculitis: report of seven cases and review of the literature. *Br J Dermatol.* 2002;146:314-316.
2. Davies HD, Sakuls P, Keystone JS. Creeping eruption: a review of clinical presentation and management of 60 cases presenting to a tropical disease unit. *Arch Dermatol.*1993;129:588-591.
3. Veraldi S, Bottini S, Carrera C, et al. Cutaneous larva migrans with folliculitis: a new clinical presentation of this infestation. *J Eur Acad Dermatol Venereol.* 2005;19: 628-630.
4. Juzych LA, Douglass MC. Cutaneous larva migrans. *Emedicine* [serial online]. Updated April 10, 2006. Available at: http://www.emedicine.com/derm/topic91.htm. Accessed May 15, 2007.
5. Ly MN, Bethel SL, Usmani AS, et al. Cutaneous *Strongyloides stercoralis* infection: an unusual presentation. *J Am Acad Dermatol.* 2003;49(suppl 2):S157-S160.
6. Richey TK, Gentry RH, Fitzpatrick JE, et al. Persistent cutaneous larva migrans due to *Ancylostoma* species. *South Med J.* 1996;89:609-611.