Student Corner

Souvenir from the Hamptons — A Case of Cutaneous Larva Migrans of Six Months' Duration

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Abstract

Cutaneous larva migrans is a distinctive serpiginous eruption caused by a reaction to burrowing hookworms. The infection is usually self-limited, normally lasting 2–8 weeks, but may persist for more than a year if misdiagnosed. Biopsies of the creeping eruption rarely reveal an organism. Thus, it is important for the infection to be recognized clinically, so that effective treatment may begin. We found topical thiabendazole to be fast and effective in treating this case of cutaneous larva migrans of six months' duration. **Key Words:** Cutaneous larva migrans, creeping eruption, ground itch, uncinarial dermatitis.

Case Report

A 35-YEAR-OLD MALE presented to the faculty practice complaining of an intensely pruritic rash of six months' duration on his neck. The patient first experienced these symptoms during the summer, shortly after sunbathing in South Hampton, New York, without a beach towel. Initial treatment with a topical steroid ointment offered no relief. Examination revealed an extensive, erythematous track measuring 2–3 mm in width on the posterior neck (Fig. 1). A more obviously undulating and serpiginous component to the track was present along the inferolateral aspect of the right side of the neck (Fig. 2). Erythematous papules studded the posterior neck and right retroauricular area. The remainder of the cutaneous examination was unremarkable. A biopsy specimen taken from the leading edge of the tract revealed a nonspecific dermatitis. Treatment with topical thiabendazole offered dramatic relief of the pruritus within 24 hours. On follow-up examination 2 weeks later, the eruption was significantly improved.

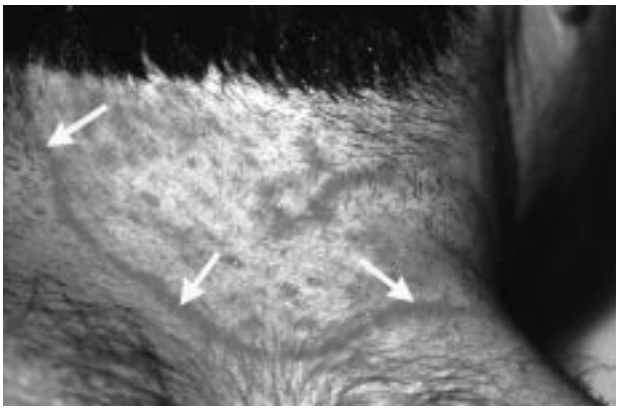

Fig. 1. Posterior neck. White arrows indicate an extensive, erythematous track.

Discussion

Cutaneous larva migrans, or creeping eruption, is a distinctive serpiginous cutaneous eruption caused by burrowing hookworms for which humans are the abnormal final hosts. If the clinical suspicion is low, the condition is often misdi-

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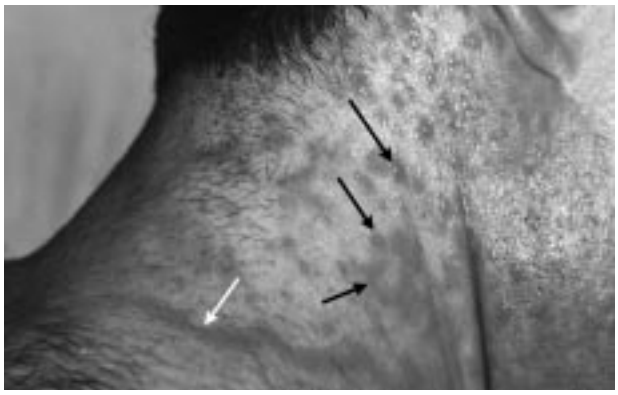

Fig. 2. Right side of the neck. White arrow indicates a serpiginous track continued from the posterior neck (see Fig. 1) and black arrows indicate erythematous papules studding neck.

agnosed. Although larva migrans is often thought of as a tropical infection, an increasing number of cases in cooler northern climates have been reported (1). The hookworms are endemic in tropical areas, but they have a worldwide distribution (2, 3).

In the United States, cutaneous larva migrans is most often caused by the larvae of the nematodes *Ancylostoma braziliense* and *Ancylostoma caninum*, hookworms of wild and domestic dogs and cats (4, 5). These worms are endemic in the central and southeastern United States, in Central and South America, and in other tropical climates. Because the larvae are located 1–2 cm ahead of the advancing edge of the lesion (1), biopsies rarely reveal an organism. In one study (6), larvae were found in only 8 out of 300 biopsy specimens. Thus, the clinical signs of this parasitic eruption are crucial for its correct diagnosis.

Typically, humans become infected when they have prolonged contact with warm, sandy, shady areas frequented by dogs and cats. Such contact, or the clinging of moist soil to the skin, allows the larvae time to penetrate through hair follicles or breaks in the skin. However, the larvae may penetrate unbroken skin by utilizing proteolytic enzymes (5, 7). Migration of the larvae is marked by tortuous, intensely pruritic, thin, elevated, erythematous tracts, 2–3 mm wide, containing serous fluid. Old tracts become dry and crusted (4, 8). Although migration generally begins after a short incubation period, the larvae may remain stationary for weeks or months (1). The larvae burrow several millimeters to a few centimeters each day, usually limited to a small area, and they may create wild patterns if many larvae are actively migrating. Migration occurs freely in the epidermis. However, the larvae rarely penetrate the basal layer into the upper dermis. It is postulated that the larvae do not possess the specific collagenases necessary to tunnel through the human epidermal basement membrane (5, 7).

The disease is usually self-limited. Most larvae die, if untreated, within 2–8 weeks, although larvae may rarely persist for up to 1 year. Leeming (9) theorizes that the difference in survival times may be due to the climate the larvae experience. Warmer climates may stimulate more active growth. As a result, the larvae consume their limited nutrient reserves faster and die of starvation. This could explain the longer duration of our patient's infection in New York.

A number of treatments are curative, including oral thiabendazole, topical thiabendazole, and oral ivermectin. Topical thiabendazole is an effective treatment without the side effects of oral thiabendazole (10, 11). Our patient was treated with a topical 15% thiabendazole cream two to three times a day and responded with dramatic relief of pruritus within 24 hours.

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