Answer to "*What is Your Diagnosis?*" on p.200

Diagnosis: Cutaneous larva migrans

Cutaneous larva migrans (CLV) is caused by penetration of the skin by nematode larvae of animal origin usually the dog and cat hookworms (*Ancylostoma caninum, Ancylostoma braziliense*).

The disease is endemic in many hot and humid tropical communities in the developing world. However, sporadic cases and even small epidemics have been reported from high-income countries. Travelers are a major target (1).

Cutaneous larva migrans is mostly seen in the hands, feet and gluteal region

Creeping eruption or CLV typically occurs after exposure to moist, sandy areas that have been contaminated with dog or cat feces. Infected hosts leave nematode eggs in the ground with droppings which evolves into filariform larvae capable of penetrating human skin upon contact (1). Larvae enter the skin through fissures, sweat glands, or follicles, causing a tingling sensation (2). The larvae may begin creeping within a few days (1) or may stay dormant for weeks to months (3). The most commonly affected areas are those directly exposed to the contaminated soil, such as hands, feet, buttocks and abdomen (1,4). Exposure may also occur indoors. Exceptionally, larvae may be transmitted through fomites. Our patient remembered sunbathing on a beach where she had noticed wandering dogs.

The first clinical sign is a small reddish papule or vesicle at the site of inoculation. Thereafter, the characteristic serpiginous, slightly elevated, erythematous track becomes visible. The larva moves a few milimeters per day (4). The rash may be accompanied by small vesicles. More than one lesion is compatible with more than one entry point (5). Within time, itching becomes more and more intense. Excoriations induced by scratching facilitate bacterial superinfection (4). Systemic involvement as Löffler's syndrome is a rare complication. Our case has presented with typical clinical features of itchy, erythematous linear serpiginous lesions; though genital area namely labium minus is a rarely reported region. She was not aware of creeping feature probably due to backside and genital locations.

Diagnosis of cutaneous larva migrans is straightforward with characteristic cutaneous eruption.

The diagnosis is essentially clinical on the basis of a typical clinical presentation. It may be supported by a recent travel history with skin's direct exposure to sand in a tropical location (4). Histopathologically, a biopsy taken just beyond the leading edge of the tract may show

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the larva in the burrow situated at the dermoepidermal junction, confirming the diagnosis.(1,6) However, most of the time vacant intracorneal cavities left by the parasite may be the only finding. Surrounding epidermis may show spongiosis accompanying necrotic keratinocytes. Dermal and epidermal eosinophils have been reported to be noteworthy (6). Laboratory analysis is not diagnostic, peripheral eosinophilia and increased immunoglobulin E levels may be found (5). Differential diagnosis includes inflammatory tinea, myiasis and other nematode infections.

Though the eruption is self limited it requires treatment.

Since these larvae cannot penetrate the basal membrane of human skin, they are unable to develop and complete their lifecycle. Thus, humans are accidental, dead-end hosts, with the larva dying and the lesions resolving within 4–8 weeks. Consequently, hookworm related CLM is a self-limiting disease (4). However, leaving untreated the skin pathology may persist for as long as 1 year in rare cases (5).

Treatment consists of anthelmintics, such as thiabendazole (50 mg per kg bodyweight for 2–4 days), albendazole (400 mg daily, given for 5–7 days), mebendazole, and ivermectin (single dose of 200 µg per kg bodyweight). Typically, the pruritus resolves 24 to 48 hours after treatment, with resolution of the lesion after one week. Topical thiabendazole 10-15% cream three times daily for 15 days, although less effective, is a good alternative for young children to avoid the potential side effects of systemic medications (3,5). Our patient has been treated by albendazole 400 mg per day for 3 days without any recurrences within 5 months.

Cutaneous larva migrans is a preventable condition.

When visiting tropical areas, beaches and sandy, moist areas, it is best to wear shoes that completely cover the feet. Also, one should avoid sitting or lying on bare sand, even if on a towel. Wandering animals should not be allowed to enter beaches. Deworming of pets is another important consideration.

References

1. Grayson W, Calonje E, McKee PH. Infectious diseases of the skin. in: McKee PH, Calonje E, Granter SR, eds. Pathology of the skin with clinical correlations. 3rd ed. China: Elsevier Mosby; 2005. p. 984-985.
2. Bravo F, Sanchez MR. New and re-emerging cutaneous infectious diseases in Latin America and other geographic areas. Dermatol Clin. 2003;21:655–668.
3. Reavis M, Jorgensen S. Acute pruritic rash on the foot. Cutaneous larva migrans. Am Fam Physician. 2010;81:203.
4. Feldmeier H, Schuster A. Mini review: Hookworm-related cutaneous larva migrans. Eur J Clin Microbiol Infect Dis. 2012;31:915-8.
5. Vano-Galvan S, Gil-Mosquera M, Truchuelo M, Jaén P. Cutaneous larva migrans: a case report. Cases J. 2009;2:112.
6. Sulica VJ, Berberian B, Kao GF. Histopathologic findings in cutaneous larva migrans. J Cutan Pathol 1988;15:346.