Cutaneous Larva Migrans
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Case Presentation

Patient: 14 year-old Caucasian male.

History of Present Illness: The patient presents with a pruritic, red, papular eruption that began on his feet 2 weeks after he came back from a trip to Jamaica. He reports associated pruritus on his bilateral dorsal feet that is worse at night and keeps him awake. The eruption progressed to linear tracks on his feet about four days later. Other children that he was playing with, including his brother and cousin, also have similar lesions. The children report playing on the beach barefoot.

Current Treatment: Ivermectin 12mg PO for 1 day then ivermectin 12mg PO 7 days later

Medical History: None

Social History: High school student, plays basketball, lives with parents and sibling

Medications: Vitamin C 500mg

Physical Examination: Several thin, tense bullae in a serpiginous pattern on the soles, insteps, right lateral foot, left 2nd web space. Several erythematous non-scaly papules bilateral dorsal feet.

Reason for Presentation: Interest

Discussion

Cutaneous larva migrans (CLM) is a cutaneous infection which occurs most often in travelers to subtropical regions. CLM is most frequently caused by animal hookworms, including Ancylostoma caninum and Ancylostoma braziliense but can also be caused by human hookworms, Ancylostoma duodenale and Necator americanus. Adult hookworms reside in the intestines of cats and dogs. The eggs are then shed in the feces and hatch in the soil. The larvae thrive in a warm and humid environment. Thus, CLM is most commonly found in warmer climates, such as Africa, Latin America, and the Caribbean region as well as the Southeast United States.

Transmission occurs with barefoot contact on damp sand or soil contaminated by animal feces. The larvae excrete protease and hyaluronidase allowing passage through the epidermis. While the larvae are able to penetrate into the lymphatic and venous system in animals, they cannot travel further than the skin in human hosts as they lack collagenase enzymes to penetrate the basement membrane zone. Depending on the larvae species, migration can be from a few millimeters to a few centimeters per day. Activity can continue for up to several weeks but the infection is self-limited.

Onset of infection begins with local pruritus and the appearance of papules at the site of entry. Some patients may recall a tingling or prickling sensation within 30 minutes of larvae penetration at the site of exposure. One to five days later, erythematous, serpiginous plaques appear which represent areas of resting larvae. In a small number of cases, vesiculobullous eruptions and folliculitis can occur. Lesions tend to occur on the feet, buttocks, and thighs as well as other exposed areas that come into contact with contaminated soil or sand.

Diagnosis is mostly clinical based on the history of travel to an endemic area and exposure to contaminated soil as well as the pathognomonic serpiginous eruption. Associated itch can be intense enough to disrupt sleep and lead to a bacterial superinfection. Labs and biopsies are generally unnecessary. Eosinophilia can be present but is not specific. Differential diagnosis includes scabies, loiasis, tinea corporis, cercarial dermatitis, and contact dermatitis. However, a good travel history will distinguish CLM from the aforementioned entities.

Treatment can be initiated with oral ivermectin at a single dose of 200ug per kilogram of bodyweight. If that is ineffective, a second dose can be given one week later. However, oral ivermectin is contraindicated in patients less than 5 years old and pregnant or breastfeeding women. Oral albendazole is pregnancy category C with data on use in pregnant women and children less than 2 years being limited. Other treatment options include topical thiabendazole. Prevention is through avoidance of barefoot contact of contaminated soil in endemic areas. Towels do not provide sufficient protection and sun chairs as well as sandals on the beach are advised.

References: