EM CASE OF THE WEEK.
BROWARD HEALTH MEDICAL CENTER
DEPARTMENT OF EMERGENCY MEDICINE

BROWARD HEALTH
Care Warriors

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Cutaneous Larva Migrans

A 62-year-old male with no past medical history presents to the ED with intense pruritus and rash over his back worsening for the past 4 days. He has never experienced these symptoms prior to this episode. He denies swelling, fever or recent travel. He denies recent insect bites, sun or sand exposure. Patient is afebrile and vitals are within normal limits. On physical exam, patient has pruritic, erythematous papules and elevated serpiginous tracks. There are also vesicles with serous fluid, excoriations and crusting. Remainder of dermatologic exam of other extremities is within normal limits. Which of the following is the most likely cause for this patient's condition?

A) Loa loa

B) Contact dermatitis

C) Tinea pedis

D) Ancylostoma braziliense or caninum

E) Sarcoptes scabiei

EM Case of the Week is a weekly "pop quiz" for ED staff.

The goal is to educate all ED personnel by sharing common pearls and pitfalls involving the care of ED patients. We intend on providing better patient care through better education for our nurses and staff.

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The correct answer is D. Ancylostoma braziliense or caninum

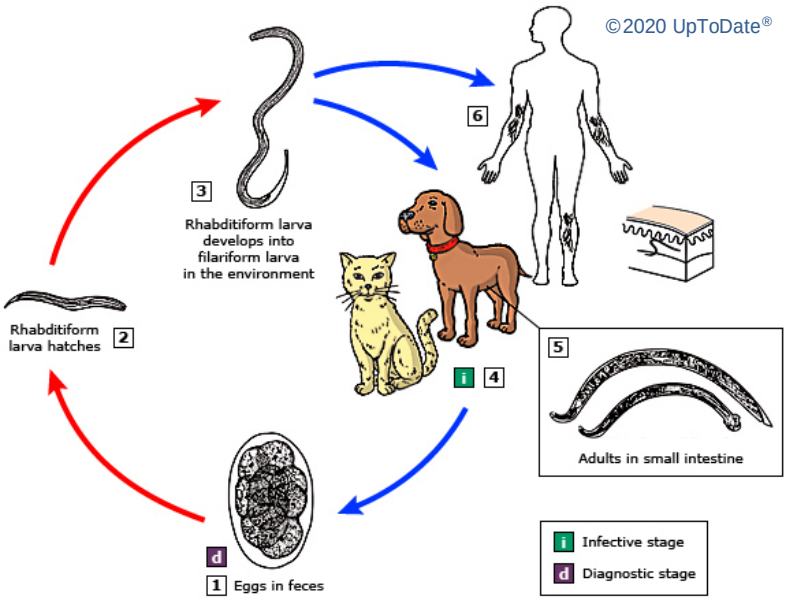
Discussion

Cutaneous larva migrans is a dermatological condition also known as creeping eruption. It is caused by the larvae of dog or cat hookworms called Ancylostoma braziliense or caninum, but also can be caused by the larva of other parasites. Animal feces deposit eggs in the soil and through direct contact, larvae enter human skin. Lower extremities are most often involved, followed by anogenital region, truck and upper extremities. It occurs more frequently in tropical and subtropical countries, including southeastern United States. Individuals who are in contact with contaminated soil and sand are at highest risk.[1]

A pruritic papule develops at the site of the penetration of the larva. After two to six days, erythematous serpiginous tracks will be seen as the larvae migrate. They can migrate several millimeters to few centimeters per day. They are usually 3 mm wide but can be 15 to 20 mm in length.[3] Lesions can become vesiculated, encrusted or infected. About 10% of cases will have vesiculobullous lesions.[2] Papulopustular inflammation of the follicles is uncommon.

Cutaneous larva migrans is a clinical diagnosis based on the patient history and physical findings. Eosinophilia is not specific and found in less than 40% of patients.[2] Biopsy would demonstrate larvae in the epidermis with eosinophilic infiltrate or spongiotic dermatitis with vesicles.[2]

The differential diagnosis should include larva currens of strongyloidiasis, which has a rapid migratory rate and associated with urticaria. Other migrating conditions include gnathostomiasis, loiasis, drancunculiasis, paragonimiasis and fascioliasis. Non-migratory skin conditions include tinea pedis, contact dermatitis, scabies and myiasis.[1]



Treatment

Lesions usually resolve spontaneously within two to eight weeks without therapy. The larvae cannot reach the gastrointestinal tract to reproduce because they do not produce collagenase to penetrate the basement membrane.[2]

The goals of treatment are to relieve symptoms and reduce likelihood of bacterial superinfection. Options for treatment include ivermectin or albendazole.[1] A single dose of ivermectin 200 mcg/kg results in cure rates of 94 to 100 percent.[3] Alternative treatment is albendazole 400 mg orally for three days. Topical anthelmintic agents are effective but often difficult to obtain. Topical 15% thiabendazole or 10% albendazole can relieve pruritus and stop progression of lesions within two days. In addition, antihistamines help with alleviating pruritus. Patients who have a severe allergic reaction may be treated with topical corticosteroids.[1]

Treating hookworm folliculitis can be difficult. It is treated with two doses of ivermectin but may require additional courses of anthelmintic agents.[1]

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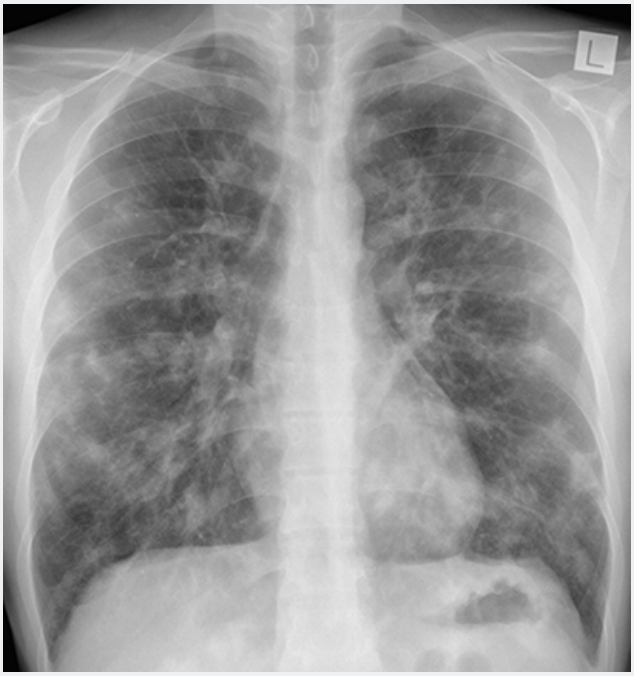

Complications include secondary infection, post-streptococcal glomerulonephritis and erythema multiforme.[2] A rare complication is hematogenous spread of larvae to the lungs. It presents as a dry cough about 1 week after the cutaneous lesions. Diagnosis is made when respiratory symptoms are present with cutaneous lesions. Chest radiograph shows transient migratory infiltrates.[1] Blood eosinophilia can be found but is nonspecific. Definitive diagnosis consists of presence of larva from respiratory secretions or bronchoalveolar lavage. Treatment is not required because this mild illness is self-limited.[1]

Take Home Points

- Cutaneous larva migrans is a human infection with larvae of dog or cat hookworm. It is also referred as creeping eruption due to the subcutaneous migration of filariform zoonotic larvae.
- Initial presentation is a pruritic papule at the site of penetration. A few days later, intensely pruritic, reddish-brown serpiginous lesions appear.
- Diagnosis is based on clinical history and physical exam. Its slower rate of migration distinguishes it from other migrating infections.
- It is often self-limited but treatment for cutaneous larva migrans is ivermectin or albendazole in combination with antihistamines for pruritus.

ABOUT THE AUTHOR

This month's case was written by Naiya Patel. Naiya is a 4th year medical student from FIU-HWCOM. She did her emergency medicine rotation at BHMC in November 2020. Naiya plans on pursuing a career in Diagnostic Radiology.

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