



Holy C.O.W.!

It's...

Clinical Question of the Week #26
January 5th, 2009 through January 12th,
2009



Happy New Year! Please e-mail your answers to Kuo, Tim, Wendy, and Kevin (klian@mednet.ucla.edu; tprovias@mednet.ucla.edu; wsimon@mednet.ucla.edu; kbreger@mednet.ucla.edu) by 0800 on Monday, January 12th, 2009. The resident or intern with the most correct answers at the end of each month will receive a prize!

Case: A 32-year-old man presents to clinic with one week of pruritic rash on his right lower extremity. He had recently taken some time away from his residency interviews and traveled for two weeks to Puerto Rico on a medical mission over the holidays. During his time there, he had also had some relaxation time on the beach with his significant other. He has no other medical problems and had not had any other exposures to chemicals, materials, new detergents or soaps. He is not on any medications. Physical examination is unremarkable with the exception of the finding shown in the image below. He reports that the rash is terribly itchy and is worried that it might be spreading.



Photo taken of the patient's medial right lower leg (left). Another example is shown on right.

Questions:

1. What is the diagnosis?

Cutaneous larva migrans, also known as the "creeping eruption," is caused by the larval stage of the cat or dog hookworm, *Ancylostoma braziliense*, or one of the other members of the family Ancylostomidae (see image). It is one of the most common causes of dermatologic disease among travelers returning from tropical regions. (0.5)

2. Name the causative agent and briefly describe the pathogenesis of the condition.

As above. Humans are a dead-end host for the parasite, which usually causes more significant tissue infection in dogs and cats. After eggs are shed in the feces of an

infected animal, they hatch in soil or on sandy beaches. Human infection occurs when skin contacts contaminated soil, most often on the lower extremities.



The causative agent, *Ancylostoma* (left), and a beach sign in the Southern U.S (right).

A pruritic papule develops at the site of each larval entry; several hundred papules may develop in heavily infested areas. After approximately 2-3 days (up to weeks later), severely pruritic, serpiginous, raised, reddish-brown lesions develop and are characteristic of the disease. The lesions migrate at a rate of several millimeters a day, and may become vesiculated, encrusted, and secondarily infected with severe scratching. Larvae lack the enzymes to digest the basement membrane and do not cause deep tissue infection. After weeks, the larvae die and are absorbed without treatment, however symptoms last for weeks and may recur up to months later.

Much less commonly, the larvae disseminate hematogenously to the lungs and cause a dry cough approximately one week after dermal invasion, lasting from a couple of weeks to months. Chest radiograph may reveal migratory infiltrates and blood/BAL eosinophilia is common. (1)

3. What is the primary risk factor for the condition? Predominant geographic regions?

Risk factors include exposure to contaminated areas, which commonly include sandy beaches and occasionally construction sites in endemic areas. Endemic regions include Africa, the Caribbean, southeast Asia, and less commonly Central and South America. (1)

4. What is the treatment?

Indications for treatment include prevention of bacterial superinfection and relief of cutaneous symptoms. Topical thiabendazole or albendazole may be used. Systemic therapy may also be given with albendazole or ivermectin. Antihistamines are useful for controlling pruritis. (0.5)