A Volcanic-Sized Education
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INTRODUCTION
Cutaneous leishmaniasis is a rare parasitic disease characterized by the presence of one or more skin lesions that present within several weeks to months of exposure. The skin lesions are classically painless and typically progress from small papules, to nodular plaques, to open volcanic ulcers with a central crater and raised borders. Although the skin changes can heal without treatment after months or years, the infection can progress to a more dangerous mucocutaneous leishmaniasis. We present a case of a young gentleman with a classic presentation of cutaneous leishmaniasis.

LEARNING OBJECTIVES

1. Recognizing a classic presentation of cutaneous leishmaniasis in the United States
2. Identifying clinical hallmarks of cutaneous leishmaniasis
3. Acknowledging the sequelae of untreated cutaneous leishmaniasis

CLINICAL CASE

Presentation
A 25 year-old male college student returned from his semester abroad in Costa Rica with two non-healing, slowly growing, volcano-like lesions on his right lower abdomen. Two weeks prior, the student had gone on a backpacking trip into the jungle. He slept in a cabin under a protective bed net, but did not use insect repellent. One week later he noted the skin lesions. Two weeks after the initial skin outbreak, the area became erythematous, and the lesions enlarged, began draining pus, and started crusting over. He also noticed a swollen inguinal lymph node, but denied having any constitutional symptoms.

Exam
Vital signs were unremarkable. Cardiovascular and respiratory examinations were unremarkable. Neurologic examination was unremarkable. Skin examination demonstrated two 1-2 cm non-pruritic, non-tender lesions, with raised borders and central ulceration on a congruent erythematous base with small, surrounding peripheral vesicles.

Laboratory Studies
A skin punch biopsy was performed, which revealed Leishmania Donovan bodies on H&E and Giemsa stained sections, and grew amastigotes for Leishmania panamensis on culture. Laboratory diagnosis was confirmed by the pathology department at UC Davis, but had to be verified at the Center for Disease Control (CDC) to initiate treatment.

Clinical Course
Diagnosis of Leishmaniasis was initially confirmed by the pathology department at UC Davis, but had to be verified at the Center for Disease Control (CDC) to initiate treatment. The patient was treated for three weeks with sodium stibogluconate and had almost complete resolution of lesions at the end of the treatment course. Even though it is possible for cutaneous leishmaniasis to resolve without treatment, in this case, it is likely that the lesions would have progressed to permanent scarring.

DISCUSSION
Leishmaniasis is a parasitic disease that is spread by the bite of an infected female sand fly. The two most common forms of leishmaniasis are cutaneous and visceral leishmaniasis. The rate of infection is relatively low in the United States, as the incidence is limited to travelers. Over 75% of US cases are acquired in Latin America, including Costa Rica, but the parasite is also found in southern Europe, northern Africa, southwestern and central Asia, and the Middle East. It is difficult to protect against the bite of a sand fly because they are very small, measuring it at only one-third the size of a typical mosquito, they do not make a “buzzing” sound, and they can pass through the small weave of a standard bed net.

A high index of suspicion for cutaneous leishmaniasis must be maintained in order to diagnose a traveler from Costa Rica, or other endemic area, with a non-healing skin lesion, especially in someone who is otherwise healthy with no constitutional symptoms. Prompt treatment with sodium stibogluconate 20mg/kg daily for 20-28 days prevents any long-term complications, including permanent disfigurement from this rare infectious disease.

CLINICAL PEARLS

Identification and Prognosis
- Almost all U.S. cases of cutaneous leishmaniasis are travelers or people who have lived in endemic areas. Occasional case reports in Texas and Oklahoma.
- Cutaneous leishmaniasis can develop weeks to months after being bitten by an infected sand fly.
- Untreated cutaneous leishmaniasis can lead to mucosal leishmaniasis, even years after initial infection, causing sores in the nose, oral cavity, and pharynx.

Prevention
- There is no vaccination to prevent cutaneous or visceral leishmaniasis.
- Stay indoors between dusk and dawn, which is when sand flies are the most active.
- Minimize exposed skin by covering with clothing when outside, and apply insect repellent to uncovered skin. Repellants that contain the chemical DEET (N,N-diethyl-meta-toluamide) are the most effective.
- Spray living and sleeping areas with an insecticide to kill insects, and sleep under a bed net that has been soaked in a pyrethroid-containing insecticide, like permethrin or deltamethrin.

REFERENCES