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Case illustrated

Cutaneous leishmaniasis in a returned traveler

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A 67-year-old male presented with nonhealing skin ulcers on his hand and forehead. Three months before the presentation, he visited Costa Rica, hiking, scuba diving, and deep-sea fishing. He also reported insect bites during his vacation. Upon returning to the U.S., he developed a pruritic rash over his left upper extremity and face. Local physicians treated him with courses of oral antibacterials, but the lesion on his hand worsened and subsequently developed purulent drainage. He had neither weight loss nor nasal congestion. He was afebrile and hemodynamically stable. There was an ulcer on the second and third interdigital web space of the left dorsal hand, several erythematous nodules with a lymphangitic pattern of spread on the left forearm and arm. There was also a 5 × 3 cm ulcer with raised margin and central eschar on his right forehead (Fig. 1). The histopathology of the left anterior upper arm skin lesion demonstrated a dense infiltrate of macrophages containing *Leishmania* sp. amastigotes (Fig. 2). The U.S Centers for Disease Control and Prevention identified the species as *Leishmania (Viannia) panamensis* by real-time PCR and DNA sequencing. He was treated with intravenous

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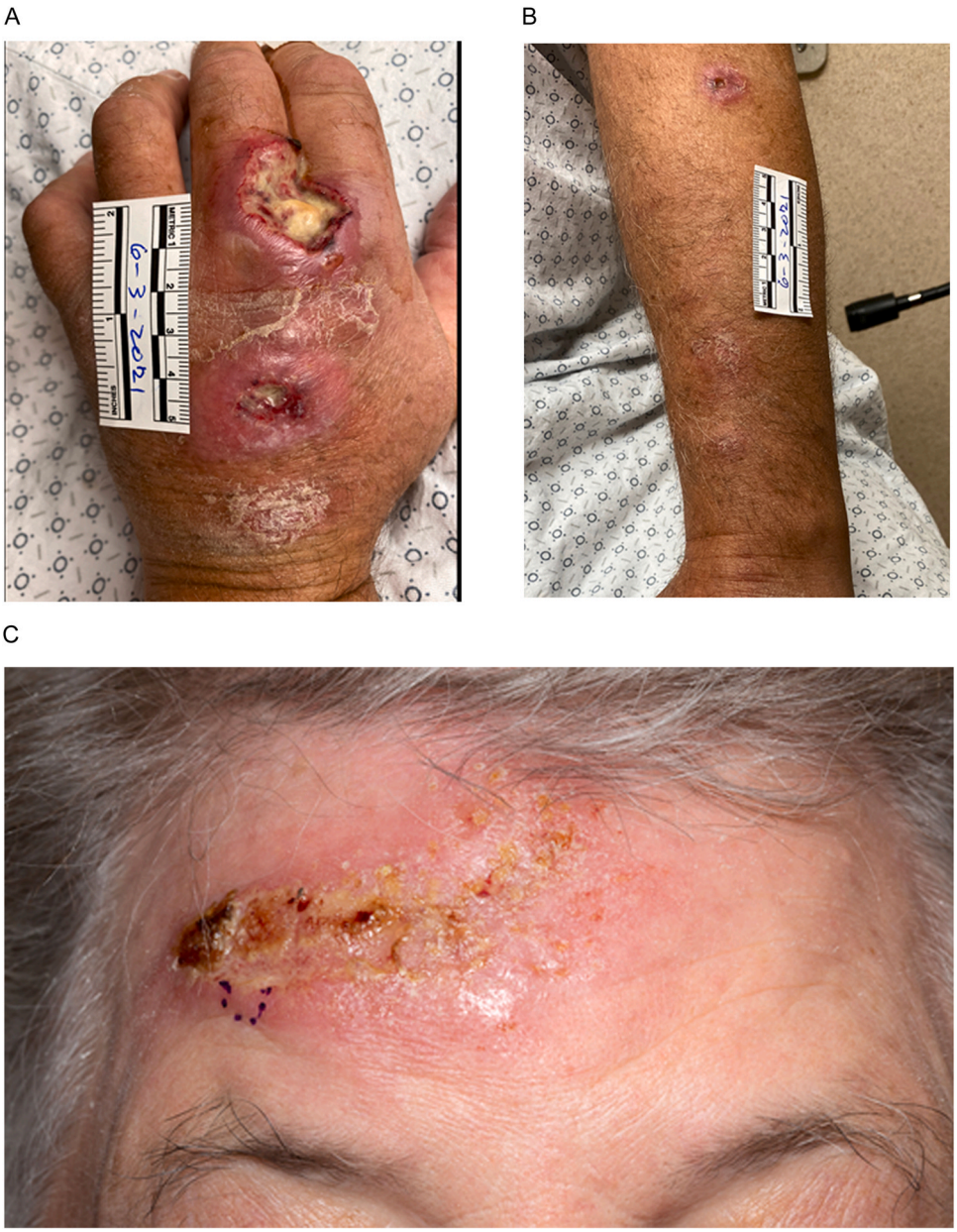

Fig. 1. A, Ulcer between the second and third interdigital web space of the left dorsal hand. B, Several erythematous nodules with a lymphangitic pattern of spread on the left forearm and arm. C, 5 × 3 cm ulcer with raised margin and central eschar on the right forehead.

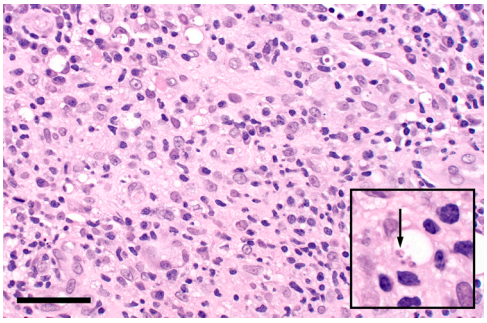

Fig. 2. Skin biopsy sections showed large aggregates of foamy histiocytes intermixed with lymphocytes and plasma cells (hematoxylin and eosin, 400x magnification). The scale bar = 50 micrometers. Individual Leishmania sp. amastigotes (arrow) were seen within histiocytic vacuoles on higher magnification (inset, 1000x). Each amastigote measures approximately 2–3 micrometers in greatest dimension and contains a small eccentric nucleus and rod-shaped kinetoplast.

liposomal amphotericin B 3 mg/kg for ten days with an excellent clinical response after six months of follow-up (Fig. 3).

Cutaneous leishmaniasis is the most common leishmanial syndrome worldwide [1]. Leishmaniasis is caused by the obligate intracellular parasite *Leishmania*. The parasite is transmitted by female sandflies, which inoculate the flagellated promastigote form into the host's skin while taking a blood meal. Most skin lesions will resolve spontaneously in 2–18 months [2]. However, certain *Leishmania* species have a higher risk of disseminating to the head and neck mucosal membranes and causing a destructive form called mucocutaneous leishmaniasis. Most cases of mucocutaneous leishmaniasis are caused by species found in the Americas, but rare cases have also been reported in Africa, Southern Europe, and the Middle East [3]. The treatment of choice is lipid formulation of amphotericin B, while miltefosine is FDA-approved for some *Viannia* subgenus, particularly *Leishmania (V.) braziliensis*, *L. (V.) panamensis*, and *L. (V.) guyanensis* [4].

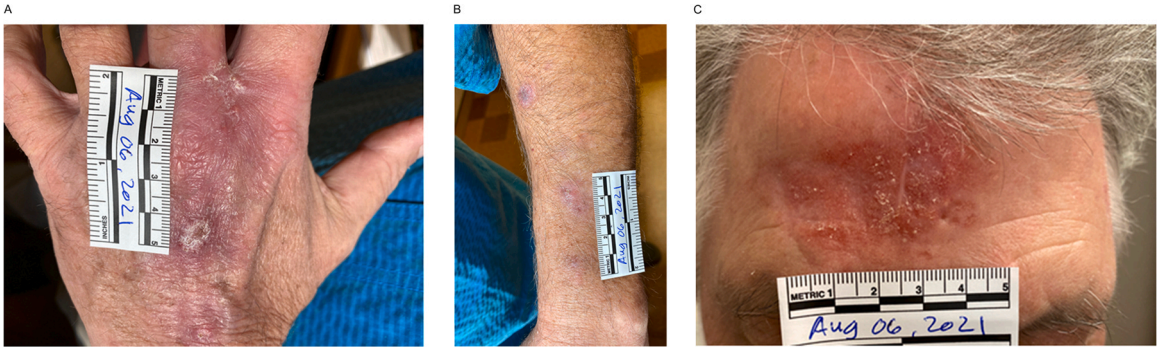

Fig. 3. Skin lesions two months after treatment.

References

[1] Aronson N, Herwaldt BL, Libman M, et al. Diagnosis and treatment of leishmaniasis: clinical practice guidelines by the infectious diseases society of America (IDSA) and the American society of tropical medicine and hygiene (ASTMH). Clin Infect Dis 2016;63(12):e202–64. https://doi.org/10.1093/cid/ciw670

[2] Burza S, Croft SL, Boelaert M. Leishmaniasis. Lancet 2018;392(10151):951–70. https://doi.org/10.1016/S0140-6736(18)31204-2

[3] Strazzulla A, Cocuzza S, Pinzone MR, et al. Mucosal leishmaniasis: an underestimated presentation of a neglected disease. Biomed Res Int 2013;2013:805108 https://doi.org/10.1155/2013/805108

[4] Leishmaniasis Resources for Health Professionals. Centers for Disease Control and Prevention. Updated September 24, 2021. Accessed January 28, 2022. ⟨https://www.cdc.gov/parasites/leishmaniasis/health_professionals/index.html⟩.