## Cutaneous leishmaniasis in a 12-year-old Syrian immigrant

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12-year-old girl, who had immigrated from Syria 7 months prior, presented to her general practitioner with a 6-month history of nonpainful papules over her right hand that had increased in size and eventually ulcerated. Over a follow-up period of 2 months, she did not improve despite receiving topical corticosteroids, mupirocin, and oral trimethoprim–sulfamethoxazole for suspected superinfected atopic dermatitis. When we saw her in our tropical diseases clinic, she was afebrile and systemically well, but had erythematous plaques, edema, ulcerations and restricted mobility on her right hand (Figure 1A).

Giemsa staining from an ulcer scraping specimen showed numerous amastigotes. The culture was positive for *Leishmania* species, and polymerase chain reaction (PCR) identified *Leishmania tropica*. Because we were concerned about the functional mobility of the patient's hand, we prescribed systemic therapy with liposomal amphotericin B, based on local guidelines, which she tolerated well. At follow-up 4 months later, her lesions had resolved (Figure 1B) and joint mobility was restored.

Cutaneous leishmaniasis is a protozoan infection transmitted by the female sandfly. This tropical disease affects 700 000 to 1 million new people annually.¹ Nonhealing ulcers in travellers and migrants from endemic regions, such as Central and South America, the Mediterranean basin, the Middle East and Central Asia, should raise suspicion of cutaneous leishmaniasis. Lack of physician knowledge about the acquisition of cutaneous leishmaniasis, even during short stays abroad, has historically led to delayed diagnosis.²,3

Differential diagnoses include *Nocardia* species, mycobacteria, endemic fungi, vasculitis, neoplasia, sarcoidosis and pyoderma gangrenosum. Identification of parasites on smear, histopathology, culture or PCR confirm the diagnosis. The type of *Leishmania* species, concomitant mucosal involvement, the size, number and location of the lesions, and host immune status are important guides to individualized management. Treatment may be local (e.g., paromomycin preparations, cryotherapy, heat therapy) or systemic (e.g., pentavalent antimonials, miltefosine, azoles and amphotericin B).





**Figure 1:** A) Erythematous scaly and crusted plaques with edema over the proximal interphalangeal joints of the second, fourth and fifth right fingers of a 12-year-old girl with cutaneous leishmaniasis, with an ulcer overlaying the lesion of the fourth finger. B) Complete reepithelialisation and healing of the lesions 4 months later, with residual postinflammatory hyperpigmentation.

## References

- Leishmaniasis. Geneva: World Health Organization; 2021. Available: https://www.who.int/news-room/fact-sheets/detail/leishmaniasis (accessed 2021 July 19).
- Boggild AK, Caumes E, Grobusch MP, et al. Cutaneous and mucocutaneous leishmaniasis in travellers and migrants: a 20-year GeoSentinel Surveillance Network analysis. J Travel Med 2019;26:taz055.
- Vandeputte M, van Henten S, van Griensven J, et al. Epidemiology, clinical pattern and impact of species-specific molecular diagnosis on management of leishmaniasis in Belgium, 2010-2018: a retrospective study. *Travel Med Infect Dis* 2020;38:101885.
- Aronson NE, Joya CA. Cutaneous leishmaniasis: updates in diagnosis and management. *Infect Dis Clin North Am* 2019;33:101-17.
- Barkati S, Ndao M, Libman M. Cutaneous leishmaniasis in the 21st century: from the laboratory to the bedside. Curr Opin Infect Dis 2019;32:419-25.
- 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). Am J Trop Med Hyg 2017;96:24-45.

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