Dermal leishmaniasis in a 25-year-old Syrian refugee

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An otherwise healthy 25-year-old Syrian man arrived in Canada as part of the country's Syrian refugee program. The patient presented to our dermatology clinic with nonresolving indurated plaques on his forehead and left hand (Figures 1A and 1B). The plaques had been present for four weeks and were otherwise asymptomatic. For our differential diagnosis, we used the "Five L's" for red dermal plaques on the face: **l**upus erythematosus/tumid lupus, Jessner **l**ymphocytic infiltrate, **l**ymphoma cutis, **l**ymphocytoma cutis and polymorphous **l**ight eruption.[1,2] Because of our patient's country of origin, we also considered **l**eprosy and **l**eishmania. Great imitators, syphilis (**l**ues) and sarcoid, can also be considered in this setting. A skin biopsy of the patient's forehead plaque showed a dense lymphocytic and histiocytic infiltrate in the superficial and mid dermis. The histiocytes showed intracellular organisms with kinetoplasts, but no capsule on the Giemsa and hematoxylin and eosin stains (Figures 1C and 1D. Additional images are available in Appendix 1, at www.cmaj.ca/lookup/suppl/doi:10.1503/cmaj.170844/-/DC1). Amastigotes were arranged radially around the periphery of the histiocyte. Polymerase chain reaction testing for leishmania identified the *Leishmania tropica* species of the parasite.

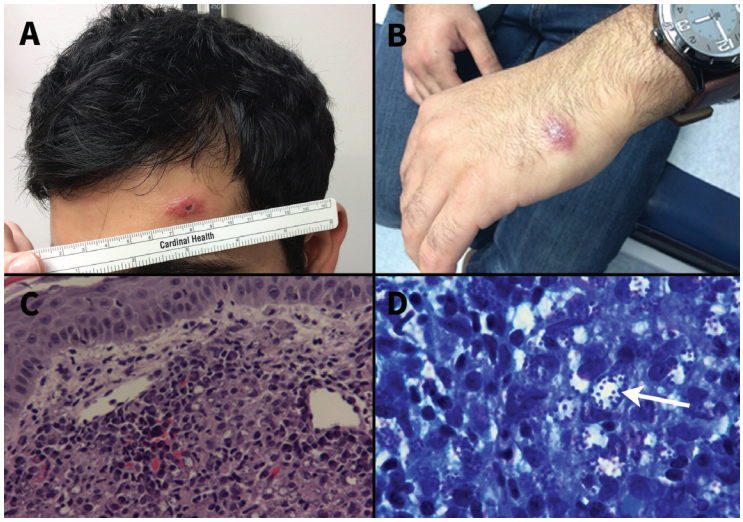

Figure 1: (A) Indurated erythematous plaque on the left side of the forehead of a 25-year-old man, with a biopsy scar in the centre of a lesion. (B) Indurated solitary plaque on the patient's left hand. (C) Hematoxylin and eosin staining of the forehead skin biopsy at 40 x magnification, showing a dense lymphocytic and histiocytic infiltrate in the superficial and mid dermis. (D) Giemsa staining highlights leishmania amastigotes arranged radially within the histiocyte (arrow).

We referred our patient to the tropical disease clinic and after considering the cost versus benefit of intralesional sodium stibogluconate (not covered under the provincial drug benefit formulary), our patient chose treatment with three courses of cryotherapy,[3] which led to a complete resolution of the lesions. Overall, when selecting a treatment, it is important to consider the specific strain of *Leishmania* and the extent of skin and systemic involvement.[4,5] Pentavalent antimonial compounds, amphotericin B and other systemic treatments can be used in cases where extensive skin or systemic disease is confirmed.[4,5]

References

1. Dermatology notes: the five L's. Hollywood (FL): Minars Dermatology; 2012. Available: www.minarsdermatology.com/dermatology_textbook/index.html?dt_the_five_ls.htm (accessed 2017 Mar. 13).
2. Dermatopathology and basic science: superficial and deep perivascular infiltrates 5 L's. Torrance (CA): Dermatopathology Institute; 2017. Available: www.dermpathmd.com/mnemonics/mnemonics_dermatopathology.htm (accessed 2017 Mar. 17).
3. Monge-Maillo B, Lopez-Velez R. Therapeutic options for old world cutaneous leishmaniasis and new world cutaneous and mucocutaneous leishmaniasis. *Drugs* 2013;73:1889-920.
4. Demers E, Forrest DM, Weichert GE. Cutaneous leishmaniasis in a returning traveller. *CMAJ* 2013;185:681-3.
5. Wolf Nassif P, DE Mello TFP, Navasconi TR, et al. Safety and efficacy of current alternatives in the topical treatment of cutaneous leishmaniasis: a systematic review. *Parasitology* 2017;144:995-1004.

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