

Cutaneous New World Leishmaniasis on a Port-wine stain birthmark*

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Abstract: We present an interesting case report of two sarcoid-like lesions on a port-wine stain (PWS) birthmark in a Brazilian patient which on investigation proved to be cutaneous leishmaniasis.

Keywords: Hemangioma, capillary; Leishmaniasis, cutaneous; Port-Wine Stain; Tropism

A 30-year-old housewife who was born and lived in the state of Maranhão in the northeast of Brazil was admitted to our dermatology department with a complaint of two painless erythematous infiltrative papules on her forehead that had started two months previously. Her stepdaughter had been treated for cutaneous leishmaniasis on her leg. The patient presented with two non-ulcerated erythematous infiltrative papules which measured 8 and 10 mm in diameter on a Port-wine stain (nevus flammeus) on the left side of her forehead (Figure 1). An intradermal test for leishmaniasis (Montenegro test) was positive (10mm). A cutaneous biopsy was taken and processed for conventional optical microscopy using H&E, Fite-Faraco, PAS and Grocott-Gomori stains and for immunohistochemistry to detect *Leishmania*.^{1,3} Histopathology revealed chronic diffuse dermatitis with a granulomatous tissue reaction and plasmacytosis (Figure 2A). Immunohistochemistry staining to detect *Leishmania* antigens performed as previously described using antibodies against *Leishmania chagasi* was positive (Figure 2B).^{4,6} Histological staining and cultures for acid-fast bacilli and fungi were negative.

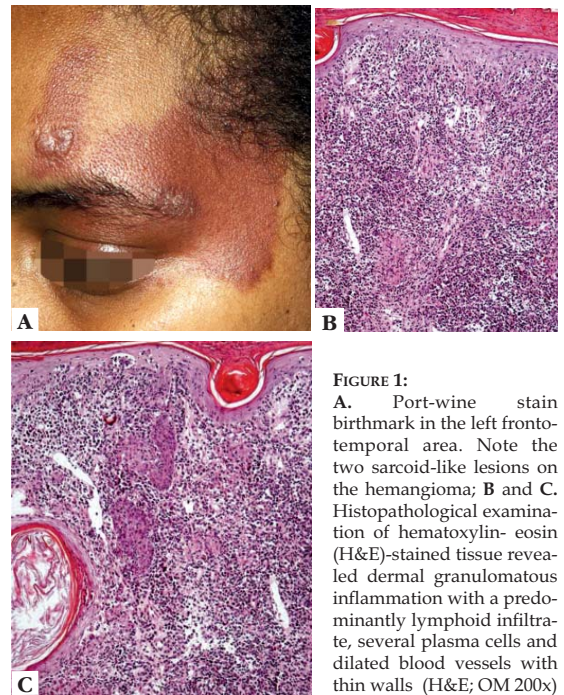


FIGURE 1:
A. Port-wine stain birthmark in the left fronto-temporal area. Note the two sarcoid-like lesions on the hemangioma; **B** and **C.** Histopathological examination of hematoxylin-eosin (H&E)-stained tissue revealed dermal granulomatous inflammation with a predominantly lymphoid infiltrate, several plasma cells and dilated blood vessels with thin walls (H&E; OM 200x)

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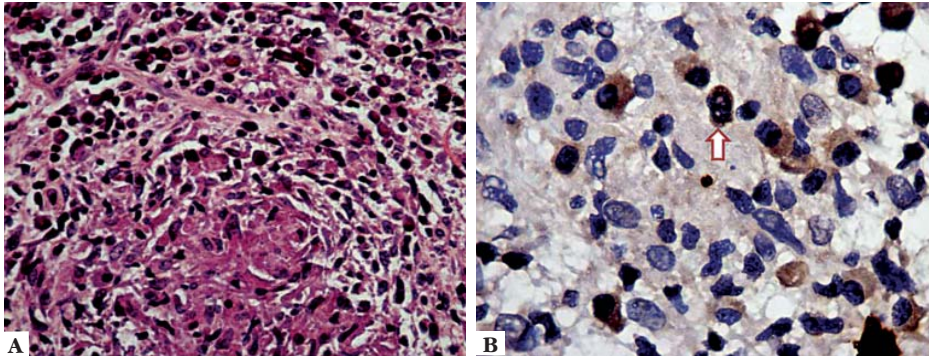


FIGURE 2: A. Detail of the histopathological examination showing dermal granulomatous inflammation with a with numerous lymphoid and plasma cells. (H&E; OM 400x); B. Immunohistochemistry with anti-Leishmania antibody (ABC peroxidase) showing a few amastigote structures (arrow) inside the macrophage cytoplasm

This is the first report of cutaneous leishmaniasis on a hemangioma in the literature. We believe a sand fly was attracted to the lesion to feed probably because of the increased vascularization in this area. Mann et al. suggested that the attraction

of *Lutzomyia* spp. to colors and odors was species-specific and demonstrated that certain colors, such as red and red-blue, exert a greater attraction on these species.⁷ □

REFERENCES

1. Penna GO, Domingues CM, Siqueira Jr JB, Elkhoury AN, Cechinel MP, Grossi MA, et al. Dermatological diseases of compulsory notification in Brazil. *An Bras Dermatol.* 2011;86:865-77.
2. Stebut EV. Immunology of cutaneous leishmaniasis: the role of mast cells, phagocytes and dendritic cells for protective immunity. *Eur J Dermatol.* 2007;17:115-22.
3. Basu MK, Ray M. Macrophage and Leishmania: an unacceptable coexistence. *Crit Rev Microbiol.* 2005;31:145-54.
4. Amato VS, Tuon FF, de Andrade HF Jr, Bacha H, Pagliari C, Fernandes ER, et al. Immunohistochemistry and polymerase chain reaction on paraffin-embedded material improve the diagnosis of cutaneous leishmaniasis in the Amazon region. *Int J Dermatol.* 2009;48:1091-5.
5. Carrasco L, Pastor A, Fariña C, Martín L, Manzarbeitia F, Requena L. Acral arteriovenous tumor developed within a nevus flammeus in a patient with Sturge-Weber syndrome. *Am J Dermatopathol.* 2003;25:341-5.
6. Lefèvre T, Koella JC, Renaud F, Hurd H, Biron DG, Thomas F. New prospects for research on manipulation of insect vectors by pathogens. *PLoS Pathog.* 2006;2:e72.
7. Mann RS, Kaufman PE, Butler JF. *Lutzomyia* spp. (Diptera: Psychodidae) response to olfactory attractant- and light emitting diode-modified Mosquito Magnet X (MM-X) traps. *J Med Entomol.* 2009;46:1052-61.

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