

Treatments described include high-potency topical corticosteroids, which were effective in one case,² and surgical excision (3 patients),^{8,9} which was not considered in the present case owing to the extent of the lesions. Successful treatment with CO₂ laser has been recently reported.⁷ In several cases, patients have been lost to follow-up.

We present a case of pseudoepitheliomatous hyperplasia as a reaction to red tattoo ink. The literature on this characteristic reaction is scarce. This is the first such case described in Spain, and the first for which accompanying dermoscopic images are provided.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

References

- Mataix J, Silvestre JF. Reacciones cutáneas adversas por tatuajes y piercings. *Actas Dermosifiliogr*. 2009;100:643–56.
- Kluger N, Durand L, Minier-Thoumin C, Plantier F, Cotton H, Berteloot E, et al. Pseudoepitheliomatous epidermal hyperplasia in tattoos: Report of three cases. *Am J Clin Dermatol*. 2008;9:337–40.
- Broussard-Steinberg C, Zemtsov A, Strausburg M, Zemtsov G, Warren S. Lichenoid reaction pattern with pseudoepitheliomatous hyperplasia - a rare tattoo reaction: A case report and review of the literature. *Case Rep Dermatol*. 2018;5:268–73.
- Tamaro A, Raffa S, Petrigliano N, Zollo V, Gelormini E, Moliterni E, et al. Marked pseudoepitheliomatous hyperplasia secondary to a red-pigmented tattoo: A case report. *J Eur Acad Dermatol Venereol*. 2018;32:e272–3.
- Kiss F, May K, Piguet V. Image Gallery: Pseudoepitheliomatous hyperplasia, a rare tattoo reaction. *Br J Dermatol*. 2016;175:e112.
- Conti R, Bassi A, Bruscinò N, Campolmi P, Cannarozzo G, Maio V, Moretti S. Pseudoepitheliomatous hyperplasia in a tattoo. *G Ital Dermatol Venereol*. 2017;152:71–2.
- Breza TS Jr, O'Brien AK, Glavin FL. Pseudoepitheliomatous hyperplasia: An unusual tattoo reaction. *JAMA Dermatol*. 2013;149:630–1.
- Cui W, McGregor DH, Stark SP, Uluarac O, Mathur SC. Pseudoepitheliomatous hyperplasia - an unusual reaction following tattoo: Report of a case and review of the literature. *Int J Dermatol*. 2007;46:743–5.
- Balfour E, Olhoffer I, Leffell D, Handerson T. Massive pseudoepitheliomatous hyperplasia: An unusual reaction to a tattoo. *Am J Dermatopathol*. 2003;25:338–40.
- Kluger N. Issues with keratoacanthoma, pseudoepitheliomatous hyperplasia and squamous cell carcinoma within tattoos: A clinical point of view. *J Cutan Pathol*. 2009;37:812–3.
- Kazlouskaya V, Junkins-Hopkins JM. Pseudoepitheliomatous Hyperplasia in a red pigment tattoo: A separate entity or hyper-trophic lichen planus-like reaction? *J Clin Aesthet Dermatol*. 2015;8:48–52.

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Treatment of Localized Cutaneous Leishmaniasis With Intralesional Meglumine Antimoniate and Photodynamic Therapy[☆]



Tratamiento de la leishmaniasis localizada mediante el antimonio de meglumina intralesional y la terapia fotodinámica

To the Editor:

Leishmaniasis, a sandfly vector-borne protozoan infection, encompasses a wide spectrum of clinical presentations. The most common form of Leishmaniasis is cutaneous leishmaniasis.¹ It affects primarily adults between the third

and 5th decades of life and the lesions are commonly located on exposed body parts. The diverse clinical spectrum of CL depends upon various factors, such as the specific causative strain, geographic location, parasitic load and host immune response.

Case Report

A 31-year-old Portuguese male presented with a 4-month history of a solitary, asymptomatic, 4 × 2 cm large, indurated crusty plaque on his forehead (Fig. 1). His medical history was unremarkable, except for early latent syphilis treated 1 year ago with good serological response. His family history was unremarkable. He denied any prescribed or over-the-counter medication. His immunization status was up-to-date and his social and travel history were significant for a recent travel to Mexico about 5 months ago.

The skin biopsy revealed a dermal diffuse inflammatory infiltrate composed by lymphocytes and histiocytes. Leishmania amastigotes were identified in the cytoplasm of dermal macrophages.

The physical examination was otherwise normal. Otorhinolaryngologic endoscopy, bone marrow aspirate and abdominal ultrasound were performed to exclude mucous

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Figure 1 Cutaneous leishmaniasis. Solitary, indurated, crusted plaque on the forehead.



Figure 2 Treated cutaneous leishmaniasis. Atrophic scar with peripheral hyperpigmentation on the forehead upon completion of 8 sessions of photodynamic therapy and intralesional meglumine.

and visceral involvement; a basic blood panel, viral serologies including HIV and HCV disclosed no abnormalities.

Since it was a solitary lesion in a cosmetically-sensitive location, a combined treatment of intralesional meglumine antimoniate and topical photodynamic therapy was started. The protocol consisted of intralesional injection of 1 mL of meglumine antimoniate per session followed by photodynamic therapy with topical methylaminolevulinate, a 3-h incubation period and red light irradiation (light emitting diode lamp (Aktilite®, 630 nm, 37 J/cm²) at weekly intervals on alternate weeks, in a total of 8 sessions. Side effects were minimal and included local erythema and a stinging sensation during the irradiation and immediately afterwards.

At the end of the treatment, the ulcer had given place to an atrophic scar with post-inflammatory hyperpigmentation (Fig. 2). Although the patient denied a confirmatory biopsy, at 12-month follow-up he remains in clinical remission, corroborated by dermatoscopic absence of vascular structures,

yellow follicular tear-sör erythema, displaying only a white central atrophic scar, with resolution of peripheral hyperpigmentation.

Discussion

The clinical presentation of cutaneous leishmaniasis consists of single or multiple, painless, frequently ulcerated, erythematous plaques with indurated borders, usually on exposed body regions.

The clinical diagnosis can be confirmed by the demonstration of amastigotes on skin biopsy specimens; by the growth of promastigotes in culture medium or molecular testing performed on skin biopsy samples. Dermoscopy can be a valuable tool as an adjunctive diagnostic and follow-up non-invasive technique for *in vivo* observation of infectious lesions. In the particular case of cutaneous leishmaniasis, the most commonly described dermatoscopic signs are diffuse erythema and vascular structures; other features include hyperkeratosis, central erosion or ulceration, yellow tear-sänd white starburst-like patterns.²

Although up to 50% of cutaneous leishmaniasis lesions are self-limited and self-healing, treatment is generally required in order to reduce the residual scar and to avoid further spread or transmission of the parasite.

In the particular case of cutaneous form, there are two possible therapeutic approaches, systemic or lesion-directed.

Systemic treatment including miltefosine, pentavalent antimonials, liposomal amphotericin B, pentamidine or azole derivatives is usually required when there are multiple (>3), large (>4 cm) or lesions localized in cosmetically sensitive areas; when there is evidence of loco-regional spread (lymphangitis) or if the patient is immunosuppressed.³

There are several treatment options available for solitary lesions of cutaneous leishmaniasis, such as cryotherapy, topical paromomycin, intralesional antimony derivatives and photodynamic therapy.

Variables such as *Leishmania* species, the clinical presentation, host immunity status and the risk of extra-cutaneous involvement dictate the best treatment option.

Intralesional antimony derivatives are a safe and effective treatment and represent a viable alternative for patients with few or small lesions and contraindications to systemic treatment.^{4,9} It is usually well tolerated and possible side effects are scarring and transient hyperpigmentation. Conversely, the use of photodynamic therapy for the treatment of cutaneous leishmaniasis, is supported by various case reports and case series.⁶⁻⁸

The decision to combine both modalities was based on the attempt to minimise the pain associated with the procedure of intralesional administration since only 4 sessions were performed and the theoretical synergistic effect of two different mechanisms of action employed, namely, photodynamic therapy relying on systemic immune response and the antimonial derivative with direct parasitocidal effect.⁴ Since a total of 8 sessions would most likely result in lesion clearance using either one of the modalities in monotherapy, the lack of further comparative data imposes a substantial limitation to the rationale used in this study.

Although more robust studies are still needed in order to determine the real value of combined approaches vs monotherapy and the optimal treatment modalities, photodynamic therapy and intralesional antimonial derivatives represent convenient options in the setting of localized cutaneous infection in immunocompetent hosts especially in aesthetically sensitive areas.

Conclusion

Local therapy is desirable for patients with uncomplicated localized cutaneous leishmaniasis. We combined two locally-acting effective agents with good tolerability and low risk of side effects achieving a complete clinical response and a good cosmetic outcome.

References

1. Reithinger R, Dujardin J, Louzir H, Pirmez C, Alexander B, Brooker S. Cutaneous Leishmaniasis. *Lancet Infect Dis.* 2007;7:581–96, [http://dx.doi.org/10.1016/S1473-3099\(07\)70209-8](http://dx.doi.org/10.1016/S1473-3099(07)70209-8).
2. Bustamante MLP, López JS, Campos CD, Sintes RN, Pugnaire MAF. Dermatoscopic signs in cutaneous leishmaniasis. *An Bras Dermatol.* 2017;92:844–6, <http://dx.doi.org/10.1590/abd1806-4841.20174441>.
3. Van der Snoek EM, Robinson DJ, Van Hellemond JJ, Neumann HAM. A review of photodynamic therapy in cutaneous leishmaniasis. *J Eur Acad Dermatol Venereol.* 2008;22:918–22, <http://dx.doi.org/10.1111/j.1468-3083.2008.02805.x>.
4. Duque MC, Vasconcellos ECF, Pimentel MIF, Lyra MR, Pacheco SJB, Marzochi MCA, et al. Standardization of intralesional meglumine antimoniate treatment for cutaneous leishmaniasis. *Rev Soc Bras Med Trop.* 2016;49:774–82, <http://dx.doi.org/10.1590/0037-8682-0213-2016>.
5. Aste N, Pau M, Ferrel C, Biggio P. Intralesional treatment of cutaneous leishmaniasis with meglumine antimoniate. *Br J Dermatol.* 1998;138:370–1, <http://dx.doi.org/10.1046/j.1365-2133.1998.02105.x>.
6. Morton CA, Szeimies RM, Basset-Séguin N, Calzavara-Pinton PG, Gilaberte Y, Haedersdal M, et al. European Dermatology Forum Guidelines on Topical Photodynamic Therapy 2019 Part 2: Emerging Indications-Field Cancerization, Photorejuvenation and Inflammatory/Infective Dermatoses. *J Eur Acad Dermatol Venereol.* 2020;34:17–29, <http://dx.doi.org/10.1111/jdv.16044>.
7. Gardlo K, Horska Z, Enk CD, Rauch L, Megahed M, Ruzicka T, et al. Treatment of cutaneous leishmaniasis by photodynamic therapy. *J Am Acad Dermatol.* 2003;48:893–6, <http://dx.doi.org/10.1067/mjd.2003.218>.
8. Fink C, Toberer F, Enk A, Gholam P. Effective treatment of cutaneous leishmaniasis caused by *Leishmania tropica* with topical photodynamic therapy. *J Dtsch Dermatol Ges.* 2016;14:836–8, <http://dx.doi.org/10.1111/ddg.13082>.

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Neumbilicoplasty With a Vertical Island Pedicle Flap[☆]



Neumbilicoplastia mediante plastia en isla vertical

To the Editor:

Introduction

Malignant umbilical skin lesions, although infrequent, usually require treatment that includes partial or total omphalectomy.¹ Given the esthetic importance of the umbilicus in the abdominal wall, its reconstruction must be considered when planning surgical treatment.

Neumbilicoplasty with an island pedicle flap can be performed in parallel with the omphalectomy, and provides adequate esthetic results. Although well described in dermatology for the reconstruction of central facial defects,

the use of this technique in this anatomical location has been described on only a few occasions.^{2–4}

Case Description

An 82-year-old patient was evaluated for the growth of an asymmetric, melanocytic umbilical lesion (12 × 6 mm) with irregular borders and heterochromia, and, on dermoscopy, an atypical pigment network, grayish-blue dots, and whitish areas (Fig. 1). A partial biopsy was performed given the patient's initial refusal to undergo surgery. Histology revealed a predominantly in situ, superficial spreading melanoma, with extensive underlying regression and an invasive component of 1.25 mm thick, without ulceration or mitotic activity. Wide excision with 2-cm margins was scheduled. A tumor extension study, including inguinal ultrasound and computerized axial tomography, revealed no findings of relevance. The patient refused to undergo a sentinel node biopsy.

Technique

Under local anesthesia, circular excision of the lesion is performed first (Fig. 2A). Next, the size of the defect is reduced (Fig. 2B) using a transient subcutaneous purse-string suture to calculate the size of the plasty (x) (Fig. 2C). A spindle-

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