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DERMATOLOGY IMAGES

Disseminated cutaneous leishmaniasis due to *Leishmania guyanensis* in an infant

Leishmaniose cutânea disseminada por *Leishmania guyanensis* em recém-nascido

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A 5-month-old male toddler from Óbidos, Brazil, presented progressive erythematous-brown plaques and papules on the face and limbs since he was 2 weeks old (Figs. 1A, B and C). Leishmania amastigote was confirmed through a skin biopsy (Fig. 2), being confirmed *Leishmania Viannia guyanensis* in DNA amplification technique using polymerase chain reaction.

Initial treatment with intravenous pentavalent antimonial 1 mg/kg/day caused fever and tonic-clonic seizures, leading to a switch to pentamidine 4 mg/kg intramuscularly once a week for 3 weeks. The patient showed satisfactory resolution of symptoms 1 week after the last dose of pentamidine. The skin lesions evolved as definitive atrophic scars after the treatment (Fig. 3A, B and C).

Cutaneous leishmaniasis (CL) has diverse clinical presentations and can be challenging when the clinical presentation is different from the classic ulcerated form[1]. In the neonatal period, CL often mimics other conditions, such as histiocytosis, lymphomas, and syphilis[2,3]. CL commonly affects children aged 2-12 years, corresponding to 10% of cases in endemic areas[2,4].

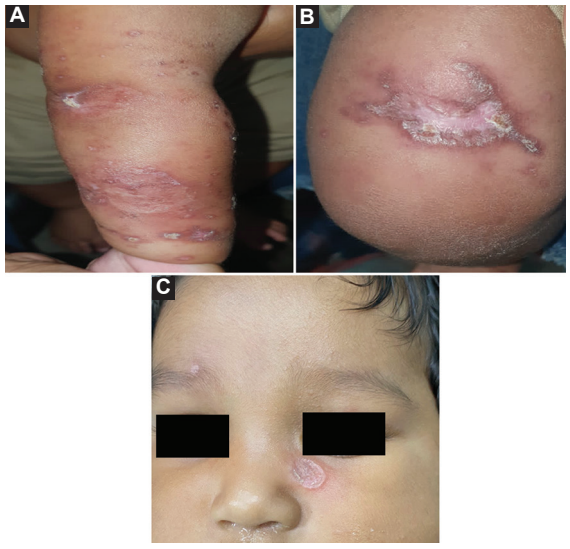

Figure 1. Lesions observed in the first outpatient visit. **A:** erythematous violaceous ulcerative plaques with crusts on the right arm. **B:** infiltrated and ulcerated plaque with erythematous violaceous edges on the left thigh. **C:** erythematous framed ulcerated lesion on the malar region.

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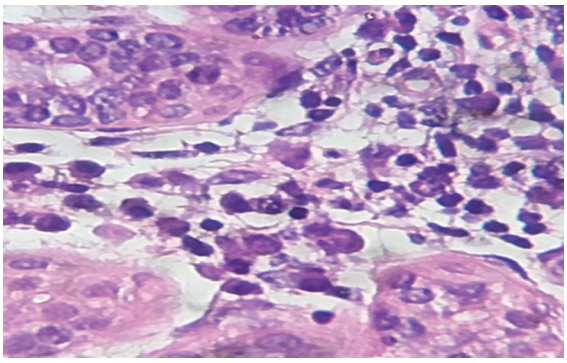

Figure 2. Histopathology from a skin lesion on the right arm demonstrating vacuolated histiocytes containing amastigotes of leishmania inside (H&E 100×).

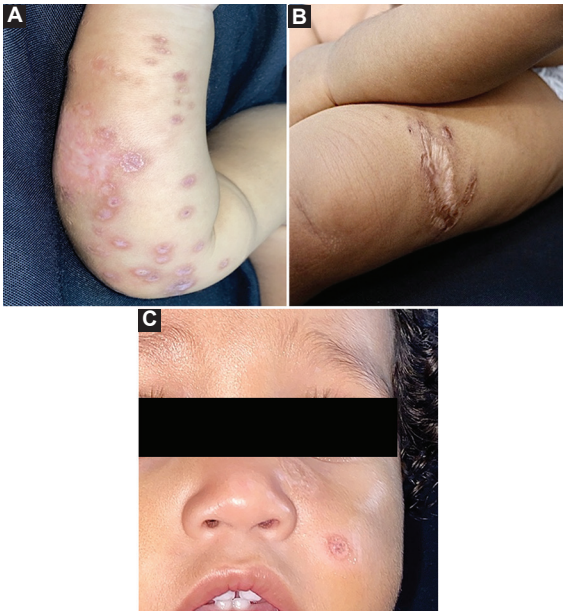

Figure 3. A-C: satisfactory response after completing treatment with three doses of pentamidine.

Treatment of pediatric CL has higher rates of therapeutic failure compared to adults, depending on differences in the immune response and medication tolerance that contribute to this disparity[4]. In addition, children have poor tolerance to systemic medications, which may be common and potentially serious adverse events[4,5].

Combination therapies, such as paromomycin, imiquimod, and amphotericin B, are being studied for optimal outcomes and reduced side effects[5]. The use of pentamidine for *L. guyanensis* infections is recommended, although off-label for children under 2 years old.

Although the reported case showed positive response and tolerability to pentamidine, further research is needed to improve CL treatment and minimize complications, aiming to reduce deformities and risks for affected patients.

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Conflicts of interest

None.

Ethical disclosures

Protection of human and animal subjects. The authors declare that no experiments were performed on humans or animals for this study.

Confidentiality of data. The authors declare that they have followed the protocols of their work center on the publication of patient data.

Right to privacy and informed consent. The authors have obtained the written informed consent of the patients or subjects mentioned in the article. The corresponding author is in possession of this document.

Use of artificial intelligence for generating text. The authors declare that they have not used any type of generative artificial intelligence for the writing of this manuscript, nor for the creation of images, graphics, tables, or their corresponding captions.

References

1. De Vries HJ, Schallig HD. Cutaneous leishmaniasis: a 2022 updated narrative review into diagnosis and management developments. Am J Clin Dermatol. 2022;23:823-40.
2. De Azeredo-Coutinho RB, Mendonça SC. Formas clínicas das leishmanioses tegumentares nas Américas. In: Leishmanioses Do Continente Americano. DGODigital Original. Rio de Janeiro: SciELO, Editora FIOCRUZ; 2014. p. 311-26.
3. Fikre H, Teklehaimanot E, Mohammed R, Mengistu M, Abebe B, Van Griensven J, et al. Atypical mucocutaneous leishmaniasis presentation mimicking rectal cancer. Case Rep Infect Dis. 2023;2023:2768626.
4. Uribe-Restrepo A, Cossio A, Desai MM, Dávalos D, Castro MD. Interventions to treat cutaneous leishmaniasis in children: a systematic review. PLoS Negl Trop Dis. 2018;12:e0006986.
5. Azim M, Khan SA, Ullah S, Ullah S, Anjum SI. Therapeutic advances in the topical treatment of cutaneous leishmaniasis: a review. PLoS Negl Trop Dis. 2021;15:e0009099.