# Tuberculoid leprosy presenting as a "racket" lesion*

Letícia Stella Gardini Brandão[1]
Jaison Antônio Barreto[1]
Ana Paula de Paiva Serrano[1]
Gabriela Franco Marques[1]
Ana Paula Cota Pinto Coelho[1]

DOI: http://dx.doi.org/10.1590/abd1806-4841.20153401

**Abstract:** The "racket" lesion is a rare presentation of tuberculoid leprosy, which consists of a thickened nerve branch emerging from a tuberculoid plaque. It results from centripetal damage to cutaneous nerves caused by granuloma formation. We describe a typical case of tuberculoid leprosy presenting as a "racket" lesion. The lesion persisted after treatment with paucibacillary multidrug therapy.
**Keywords:** Leprosy, paucibacillary; Leprosy, tuberculoid; Peripheral nerves

## CASE REPORT

A 38-year-old man had a 2-year history of well-defined annular plaque in the medial dorsal region of his left hand. The plaque had erythematous borders consisting of grouped papules and its infiltration gradually decreased towards the normochronic, atrophic center. There was pronounced sensory loss at the site. We also observed a significant thickening of the dorsal branch of the radial nerve emerging from the plaque, which characterizes the "racket" lesion (Figures 1 and 2). The patient had undergone treatment with multidrug therapy paucibacillary in the past 6 months. Complementary tests revealed negative sputum smear microscopy and 11.5 mm Mitsuda reaction. Skin biopsy showed the formation of tuberculous granuloma and associated type 1 reaction (Figures 3 and 4).

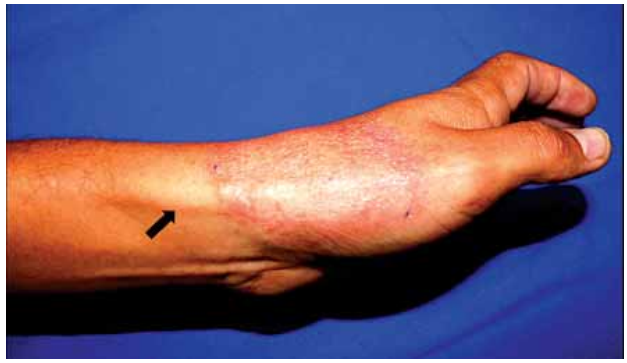

**Figure 1:** "Racket" lesion: Circular plaque with papulous well-defined borders in the medial dorsal region of the left hand. Significant thickening of the dorsal branch of the radial nerve (arrow)

Received on 26.01.2014
Approved by the Advisory Board and accepted for publication on 14.05.2014
* Study conducted at the Lauro de Souza Lima Institute (ILSL) – Bauru (SP), Brazil.
Financial Support: None.
Conflict of Interest: None.

[1] Lauro de Souza Lima Institute (ILSL) – Bauru (SP), Brazil.

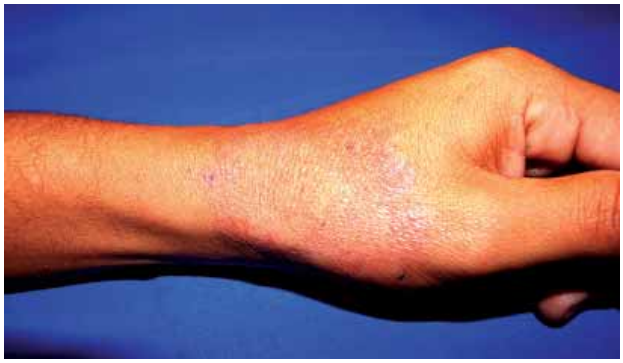

**Figure 2:** "Racket" lesion, typical of tuberculoid leprosy

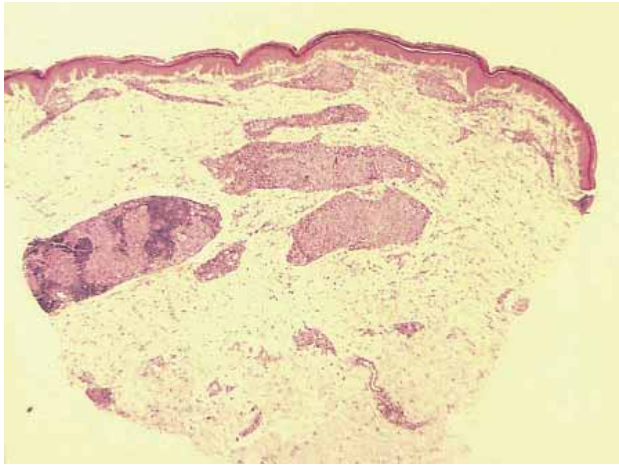

**Figure 3:** Pathological examination of a fragment of the border of the skin lesion: Superficial and deep tuberculoid granulomas along the neural pathway (HE, 40X)

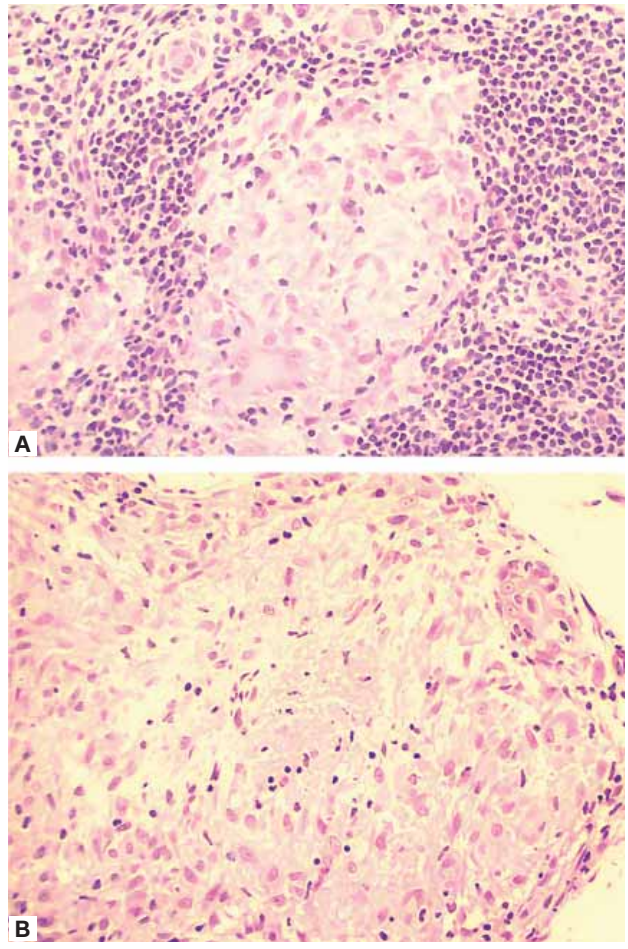


**Figure 4:** Pathological examination of a fragment of the border of the skin lesion: A) Tuberculoid granuloma with epithelioid macrophages in the center and a large number of lymphocytes and monocytes in the periphery; B) Tuberculoid granuloma with central necrosis (HE, 400X)

## DISCUSSION

The "tennis racket" lesion is a typical presentation of tuberculoid leprosy. It consists of a thickened nerve branch emerging from a tuberculoid plaque and results from centripetal damage to cutaneous nerves caused by granuloma formation. [1,2,3]

In paucibacillary patients, the evolution of neural lesions is not always related to multidrug therapy, as in the case presented here, in which the lesion persisted after the treatment had been discontinued. Its persistence is justified because the amount of bacilli in tuberculoid forms of leprosy is minimal, and antimicrobial drugs only act on metabolically active bacilli. Thus, bacterial destruction is independent from the therapy used in the treatment of this group of patients. This explains the spontaneous healing observed in patients in the "pre-dapsone" era. [4,5,6]

However, the authors emphasize that, despite the possibility of spontaneous regression of tuberculoid leprosy, all patients should be treated and have their contacts examined in order to identify new cases of leprosy.❑

## REFERENCE

1. Carneiro APS, Correia MMS, Cury Filho M, Marcos EVC, Souza FC, Nogueira MÊS, et al. Tuberculoid leprosy presenting as a racket lesion: report of a typical case. Hansen Int 2008;33:35-40.
2. Sa N, Silva AK, Averbeck E, Guerini M. "Racket" lesion reaction in a dimorphic tuberculoid leprosy patient. J Am Acad Dermatol. 2011;64: AB99.
3. Scollard DM, Adams LB, Gillis TP, Krahenbuhl JL, Truman RW, Williams DL. The continuing challenges of leprosy. Clin Microbiol Rev. 2006;19:338-81.
4. Opromolla DVA. Ação terapêutica das drogas anti-hansênicas e evidências de persistência microbiana nos casos paucibacilares. Hansen Int. 2004;29:1-3.
5. Araújo MG. Hanseníase no Brasil. Rev Soc Bras Med Trop. 2003;36:373-82.
6. Opromolla DV, Tonello CJ.Antibiotics in leprosy, with special reference to rifampicin. Lepr Rev. 1975;46:141-5.

*Mailing address:*
*Gabriela Franco Marques*
*Instituto Lauro de Souza Lima*
*Rodovia Comandante João Ribeiro de Barros km 225/226*
*Distrito Industrial*
*17034-971 - Bauru - SP*
*Brazil*
*E-mail: gabriela_franco_@hotmail.com*

How to cite this article: Brandão LSG, Marques GF, Barreto JA, Coelho APCP, Serrano APP. Tuberculoid leprosy presenting as a "racket" lesion. An Bras Dermatol. 2015; 90(3):420-2.