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*RESEARCH ARTICLE*

# LEPROMATOUS LEPROSY REVEALED BY PALMOPLANTAR NODULAR LESIONS

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## *Abstract*

Leprosy is a chronic debilitating disorder caused by the acid-fast bacilli **Mycobacterium leprae** (**M. leprae**).This bacilli exhibit a distinctive predilection for the skin and peripheral nerves, although they can potentially impact any system in the body.Palmoplantar involvement has been infrequently reported in leprosy and is an easily misdiagnosed entity.We report a case of a young female presented with a palmo plantar nodular lesions for wich a skin biopsy showed histological signs consistent with lepromatous leprosy.



## Introduction:

Leprosy, a persistent infectious disease is induced by Mycobacterium leprae. It predominantly targets regions of the body with relatively lower temperatures (1). The palms, soles, scalp, genitalia, groins, and axillae are typically regarded as areas relatively unaffected by leprosy due to their naturally higher local temperatures (2). However Palmoplantar involvement has been infrequently reported in leprosy and is an easily misdiagnosed entity. We report a case of a lepromatous leprosy revealed by palmo plantar nodular lesions in a young female.

**Case report:**

A 20-year-old female was seen in consultationfor erythematous nodular lesions0.5 to 1.5 cm in diameter, located on palmo plantar regions (Fig. 1a andb).

Examination of the tegument also revealed erythematous nodular lesions on the palmo plantar areas, with no other lesions elsewhere (Fig. 2).

Given this clinical scenario, the possible diagnoses considered were nodular histiocytosis and lepromatous leprosy and we decided to perform a skin biopsy.

Anatomopathological examination revealed a large inflammatory infiltrate in the middle and deep dermis, with large foamy histiocytic cellsin a peri-annexal and perivascular arrangement.

## Discussion:

Leprosy is a chronic infection caused by Mycobacterium leprae (M. leprae) or Hansen's bacillus (HB), whose prevalence is declining thanks to the efforts of health authorities [3].

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Leprosy is a disease characterized by its clinical polymorphism, which depends on the patient's immunological status and immune response to M. leprae. Lepromatous leprosy, which is the multibacillary form, generally manifests as non-inflammatory lesions, hypochromic macules and normoesthetic erythematous papulo-nodules, of progressive onset [4]. In addition to these cutaneous signs, nerve damage may also occur (cutaneo-neuritic form).

Histologically, the lepromatous infiltrate is generally dense, respecting the papillary dermis, with a pericapillary, periannexal and perineural disposition. The infiltrate is made up mainly of histiocytes with foamy cytoplasm and rare lymphocytes. BHs are numerous and often clustered in histiocytes and nerves [3]. Treatment requires multidrug therapy with dapsone, rifampicin and clofazimine. In our patient, the reason for consultation was palmo-plantar involvement in the form of erythematous papules, a misleading presentation of leprosy.

A skin biopsy was employed to correct the diagnosis. This case highlights that this pathology is often unrecognized in low-endemicity countries, complicating diagnosis. Careful questioning and a thorough clinical examination are crucial for early diagnosis and treatment, which are the only ways to prevent neurological complications.

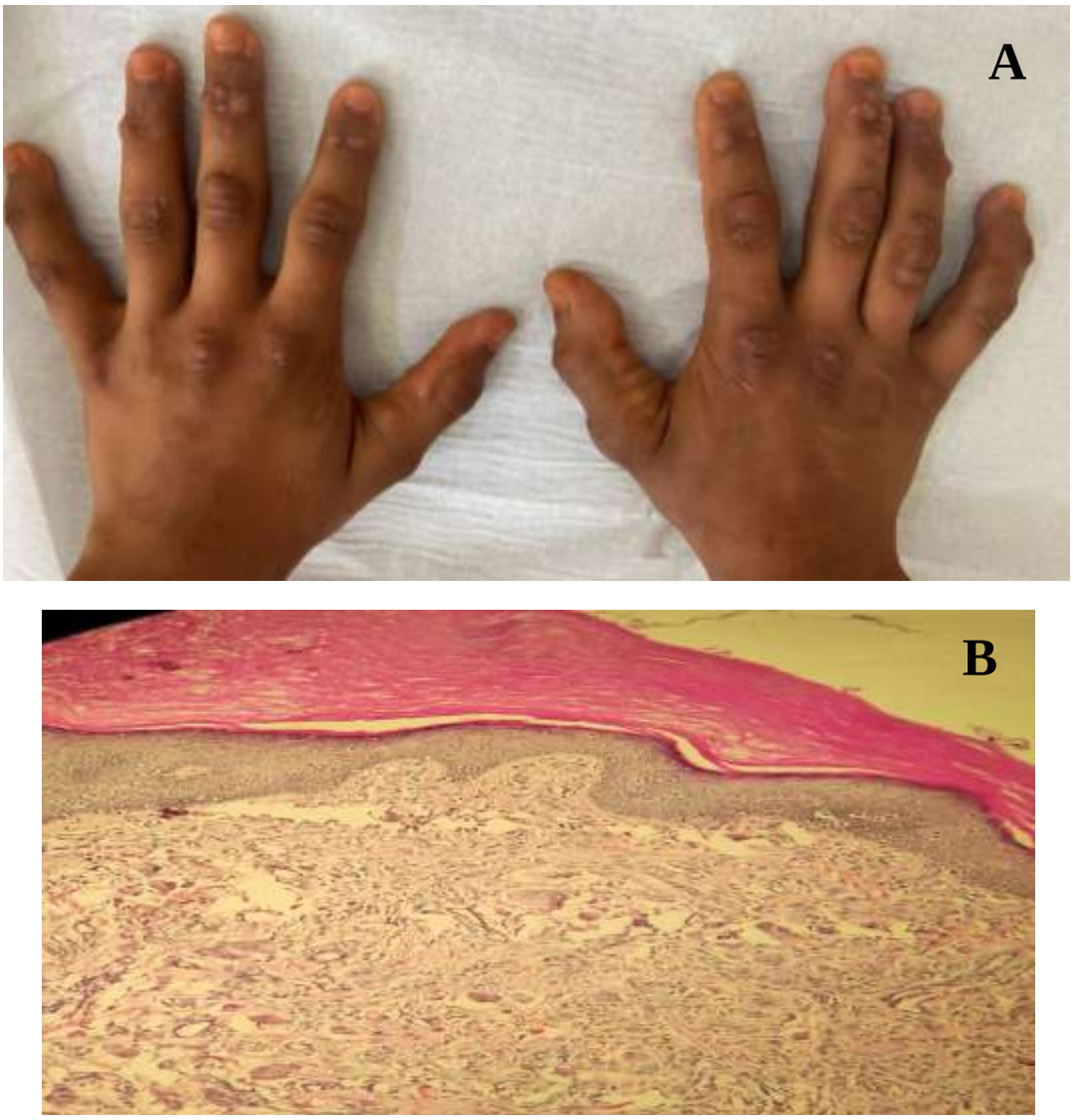


**Figure 1:**
**A** : Erythematous papules and nodules on palmar and dorsal surfaces of hands.
**B** : Anatomopathological examination revealed a large inflammatory infiltrate in the middle and deep dermis, with large foamy histiocytic cells in a peri-annexal and perivascular arrangement.

## Conclusion:

Although leprosy has been largely eliminated in most countries, it remains a great mimicker with newer atypical and uncommon presentations continuing to emerge. To diagnose these unusual cases, especially those with a higher risk of reactions and disabilities like palmoplantar involvement, a high index of suspicion is necessary. Timely and appropriate management is crucial to improve the patient's quality of life.

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