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A RARE CASE OF LINGUAL LEPROMA IN MULTIBACILLARY LEPROSY

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ABSTRACT

Nodular oral lesions are rare but significant findings in patients with multibacillary forms of Hansen's disease. We present the case of a 41-year-old woman with borderline lepromatous leprosy, whose clinical picture included typical cutaneous features such as leonine facies and nodules on the extremities, but also a rare leproma located on the midline of the tongue. The diagnosis was supported by histopathological analysis and electromyography revealing peripheral neuropathy. The patient responded to standard multidrug therapy. This case highlights the importance of inspecting the oral mucosa during evaluation of leprosy, especially in patients with high bacterial loads and cutaneous infiltration. Early detection of lingual lepromas may provide crucial diagnostic and staging information in multibacillary disease.

KEYWORDS

Lepromatous leprosy, Lingual leproma, Oral lesions, Mycobacterium leprae

MAIN ARTICLE

Introduction

Leprosy, or Hansen's disease, is a chronic granulomatous infection caused by Mycobacterium leprae, primarily affecting the skin and peripheral nerves. The multibacillary forms, particularly lepromatous leprosy, can involve various organs, including mucous membranes. Oral cavity lesions are underdiagnosed but may appear in up to 60% of lepromatous patients, especially in advanced stages of the disease [1]. These lesions may include nodules, plaques, ulcers, or diffuse infiltrations, predominantly affecting the hard palate, uvula, gingiva, and lips [1,2]. The tongue, while rarely involved, may host solitary or multiple lepromas due to its exposure to lower temperatures and its stratified squamous epithelium, which favors bacillary colonization [3]. Lingual lepromas are therefore a valuable but overlooked sign of systemic dissemination in advanced leprosy and require histological confirmation [4]. We report here a rare case of a lingual leproma discovered during hospitalization for borderline lepromatous leprosy in a woman with diffuse skin involvement.

Case report

A 41-year-old woman, with no significant medical history aside from asthma, presented with a 3-year history of progressively increasing pruritic nodular skin lesions. The initial eruption appeared on the face and gradually extended to the upper and lower limbs. Prior dermatological treatments had failed. Upon hospital admission, the patient exhibited classic cutaneous signs of multibacillary leprosy, including diffuse skin infiltration with hyperpigmented plaques in a glove-and-stocking distribution, a leonine facies with thickened and erythematous facial skin, madarosis, glabrous eyebrows, and nasal deformity (Figure 1). Numerous subcutaneous nodules were found symmetrically on the forearms, hands, and lower legs. A unique finding was a dermal nodule located at the midline of the tongue, consistent with a lingual leproma (Figure 2).

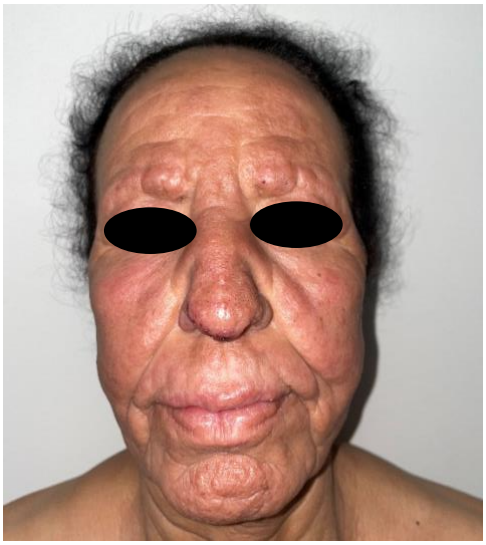

***Figure 1**: leonine face*

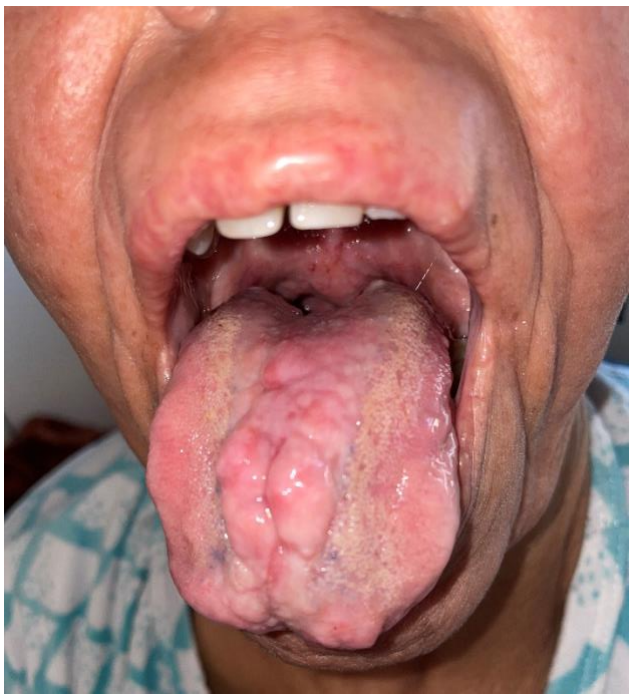

***Figure 2**: lingual leproma*

Sensory testing over the lesions showed preserved tactile and thermal sensation. Neurologic examination revealed no motor deficits. However, electromyography indicated a sensitive peripheral neuropathy with abolished sensory potentials in the lower limbs and reduced amplitudes in the upper limbs. Laboratory investigations showed anemia with vitamin B12 and folate deficiencies. A skin biopsy confirmed multibacillary leprosy. The patient was

initiated on WHO-recommended multidrug therapy, including rifampicin, clofazimine, and dapsone. After 17 days of treatment, clinical improvement was noted, with partial regression of nodules and regrowth of eyebrows. The lingual lesion was stable and painless during follow-up.

Discussion

Oral involvement in lepromatous leprosy is well-documented but frequently underrecognized in clinical practice. It may reflect systemic dissemination and bacillary overload [1]. Tongue lesions are among the least common oral manifestations, yet they are of high diagnostic relevance due to the unique histopathological and microbiological environment of the oral mucosa [2]. In one histopathological study of untreated lepromatous patients, tongue biopsies revealed lepromatous infiltration even in the absence of visible lesions, suggesting subclinical mucosal involvement [3]. The lesions may manifest as erythematous patches, fissures, nodules, or thickening, sometimes resulting in dysarthria or dysphagia in late stages [2]. Histological findings from lingual lepromas typically show infiltrates of foamy macrophages filled with acid-fast bacilli and surrounding granulomatous inflammation. Diagnosis is confirmed through slit-skin smears or biopsy, using special stains such as Fite-Faraco [3,4]. Oral manifestations may mimic other conditions such as syphilitic glossitis, aphthous ulcers, or even neoplastic lesions, making biopsy essential [5].

Management involves standard multidrug therapy, and regression of oral lesions is typically observed within weeks to months after treatment initiation. Regular oral examination should be performed in all patients with lepromatous features, even when asymptomatic, to detect these subtle but clinically meaningful findings [1,2].

Conclusion

Lingual lepromas are rare but significant markers of multibacillary leprosy. Their identification requires a high index of suspicion and thorough oral examination, especially in patients with diffuse cutaneous involvement. This case demonstrates that tongue nodules may occur without neurological or systemic symptoms and should prompt early biopsy and treatment. Awareness of oral signs of leprosy enhances diagnostic accuracy and may improve outcomes through earlier intervention.

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REFERENCES

1. Chimenos-Küstner E, Marques-Soares MS, Marí-Roig A. Lepromatous leprosy: a review and case report with oral manifestations. Med Oral Patol Oral Cir Bucal. 2006;11(4):E301–E305.
2. Motta AC, Furini RB, Simão JC, Ferreira MA, Foss NT. Oral lesions in leprosy. Indian J Dermatol Venereol Leprol. 2012;78(6):719–722.
3. Sharma R, Sharma R, Singh R. Lingual involvement in lepromatous leprosy: a clinicopathologic study. Clin Exp Dermatol. 1993;18(6):505–508.
4. Rao AG, Natraj HV. Unusual oral manifestations of leprosy: a clinical challenge. Oral Dis. 2013;19(7):754–758.
5. Bhat RM, Prakash C. Leprosy: An overview of pathophysiology, classification, and diagnosis. J Oral Maxillofac Pathol. 2020;24(2):218–224.