

CASE REPORT

An unusual presentation of lepromatous leprosy as verrucous growth in the oral cavity

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Summary Leprosy is a multisystem disorder with various spectrum of cutaneous findings. In the initial era of the history of leprosy, mucosal lesions were typical. Of late, mucosal findings have remarkably declined because of early treatment of leprosy. However, oral lesions have eminent epidemiological significance, given their role in disease transmission. Oral findings are more common in multi-bacillary leprosy, and patients usually present with evident skin lesions. The hard palate is the commonest site of oral involvement. Clinical lesions do not always show specific histology of leprosy. Specific histologic features are important in disease transmission as well as recurrent reactions. Here, we report a case of multi-bacillary leprosy presenting as oral verrucous lesions in the soft palate, with histologic evidence of specific changes of leprosy. In this interesting case, a few cutaneous papules were noted during physical examination of the patient. We report this case to emphasize the irrefutable socioeconomic impact of oral lesions in leprosy.

Keywords: Histopathology, Leprosy, Oral cavity, Soft palate, Transmission

Introduction

Leprosy is a multisystem bacterial infection caused by the insidious bacilli *Mycobacterium leprae*.¹ Earlier, it was classically diagnosed by its characteristic facial deformities along with mucosal changes.² In recent times, due to early diagnosis and treatment, facial lesions are less frequent, and hence, findings of mucosal manifestations such as oral and genital lesions are declining.³ However, mucosal lesions have epidemiological significance because they are the secondary source of transmission after nasal lesions.⁴ Here, we discuss a case of multibacillary leprosy with oral manifestations.

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Case Report

A 31 year old man presented to the Department of Dermatology, Dhulikhel Hospital, with a gradually progressive asymptomatic lesion in the oral cavity for one year duration. It started as papules in the soft palate that gradually increased in size and number. They coalesced into verrucous cobblestone-like growth extending into hard palate anteriorly, and uvula and fauces posteriorly. There was no history of pain, or burning sensation in the mouth. According to the patient, the lesions did not bleed or erode. He did not have any other complaints, and there was no family history of similar illness.

On examination, the patient had diffuse infiltration of the ear lobes with plaque like thickening bilaterally. We also noticed a few discrete, asymptomatic, smooth, skin coloured nodules on bilateral flanks and lower limbs. There was no madarosis, nasal deformity or leonine facies. The peripheral nerve trunks such as greater auricular, ulnar and popliteal nerves were bilaterally thickened. However, there was no sensory or motor loss or lymphadenopathy (Figures 1 and 2).

For histopathological evaluation, biospies were taken from both cutaneous and oral lesions. The skin lesion revealed epidermal atrophy and dermal findings of multiple spindle shaped macrophages in storiform pattern without granuloma. Histopathology taken from the soft palate revealed acanthosis, absence of Grenz zone and diffuse dermal lymphocytic infiltrates. There were abundant acid fast bacilli in both the lesions. Hence, both lesions showed histopathology consistent with leprosy. Slit skin smear revealed Bacterial index of 6+ (Figure 3).

A diagnosis of histoid leprosy was made, and patient was started on multibacillary multidrug therapy (MB-MDT).

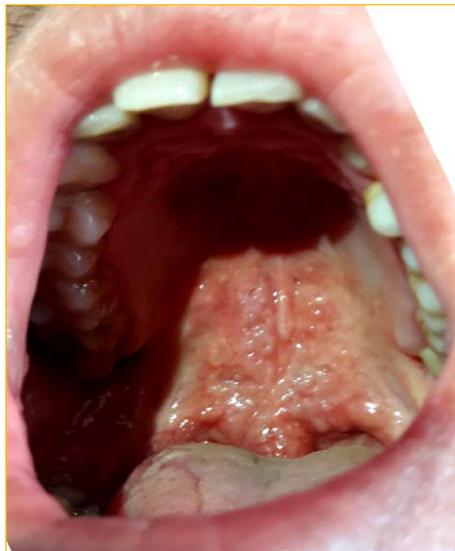


Figure 1. Well defined solitary, salmon-pink, rugose plaque over soft palate.



Figure 2. Multiple, discrete skin colored papules over the waist. Inset: Close up view of papules.

Discussion

Leprosy is a multisystem disorder that primarily affects the skin and the peripheral nerves. In earlier eras, destructive facial changes and mucosal findings were the hallmark of the disease.¹ In recent times, early diagnosis and prompt initiation of treatment, has meant a decline in the incidence of mucosal lesions.³ Oral involvement was previously reported in 19–60% cases.^{5,6} They often occur secondary to nasal infiltration. Following nasal obstruction, mouth breathing may lead to the appearance of lesions in the oral cavity, as leprosy bacilli has a strong predilection to areas with cooler temperatures.⁷ However, hematogenous or lymphatic dissemination of the bacilli leading to oral lesions, may not be associated with nasal symptoms.^{7,8}

Oral lesions are more common in multi-bacillary disease, and are markers of late manifestation.^{8,9} However, some authors reported latent involvement of the oral cavity and less advanced disease as well.^{10,11} Oral lesions are more common in men than women, probably owing to greater cosmetic concern in women and hence, earlier presentation to the health care facility.¹²

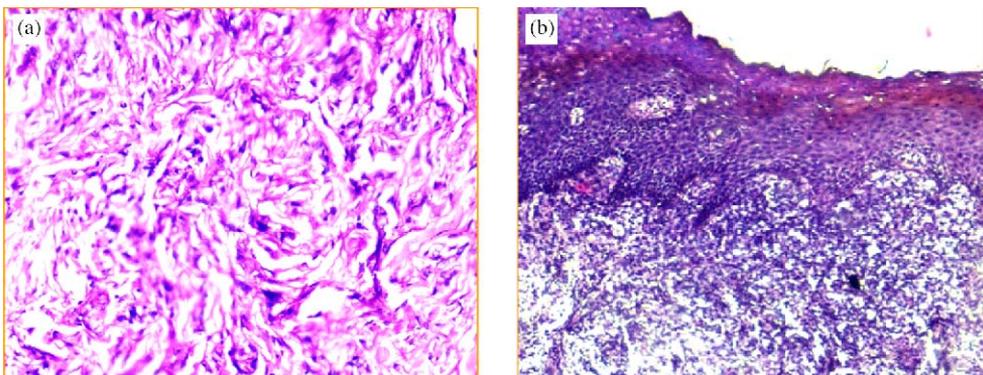


Figure 3. (a) Histology of skin lesion shows spindle shaped macrophages in whorls. (H&E 40X). (b) Histology of oral lesion shows non-specific lymphocytic dermal infiltrate (H&E 10X).

In 1932, Pinkerson described the evolution of oral lesions. They begin as congestion, followed by infiltrative plaque or edema that gradually become coalescent nodules.¹³ Complications such as ulceration, palatal perforation and fibrosis, may lead to disfigurement, regurgitation, nasal phonation, etc. Early diagnosis prevents tremendous functional disability and psychosocial burden.

According to the World Health Organization (WHO), the hard palate is the most frequently affected site.¹⁴ However, some studies report that the soft palate was the commonest site of involvement.^{8,15,16} Lesions in our patient started from the soft palate, consistent with the latter studies. Other oral lesions described in literature are macrochelia, glossitis, chronic atrophic candidiasis, gingivitis, periodontitis and fissured tongue.¹⁷

Histopathological findings of the oral lesions include epidermal thinning, absence of Grenz zone and intense infiltrates with granuloma and acid fast bacilli.^{18,19} Absence of granuloma and acid fast bacilli imply non-specific findings. No lesion in the oral cavity is pathognomonic of leprosy. In contrast, specific histology may be obtained in clinically normal oral cavity sometimes.¹⁰ Hence, all clinical lesions should be confirmed by a biopsy.

The upper airways are the portal of entry and exit in disease transmission.²⁰ Molecular and immunological studies show that oral mucosa may be the secondary source of leprose bacilli, after the nasal cavity.⁴ Oral lesions may be important in adult to child transmission.²¹ Hence, oral lesions have great epidemiological significance. Nepal is one of the seven countries in the world, with 80% disease burden.^{22,23} Moreover, it has been noted that maintenance of oral infection, may lead to recurrent leprose reactions.²⁴ Hence, we emphasise the importance of routine examination of the oral cavity, and histopathology of suspected lesions in select cases.

Conclusion

Oral manifestation of leprosy may be the presenting complaint in a minority of patients. Oral lesions are important in secondary disease transmission, as well as facial disfigurement in the long run. However, it is crucial to confirm specific histology in all cases with clinical lesions. Hence, we recommend routine examination of the oral cavity in every case of leprosy and histopathology in clinically evident oral leprosy.

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