CASE REPORT

Oral Lichen Planus in a 7-year-old Child: A Rare Case Report

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Abstract

Lichen planus is a chronic inflammatory mucocutaneous disease reported most frequently in adults and relatively rare in children with the prevalence being 0.03%. This article reports a case of oral lichen planus (OLP) in a 7-year-old girl without any attendant skin lesions, diagnostic workup, and management protocol for the same. This article also emphasizes the need to consider OLP as a differential diagnosis for white lesions of oral mucosa in children.

Keywords: Children, Lichen planus, Oral mucosa

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Introduction

Lichen planus was described as a chronic inflammatory mucocutaneous disease by British Physician Erasmus Wilson.[1] Lichen planus is one of the most predominant dermatological conditions having oral manifestations, with a prevalence of 0.5–2% and greater female predilection.[2] The classic cutaneous lesions are described using "6 P's": purplish, polygonal, planar, pruritic, papules, and plaques, commonly involving flexor surfaces of legs and arms. Ridging of nail bed with thinning and subungual hyperkeratosis are common features when nail bed is affected. When involving the scalp, it can lead to scarring and alopecia.[3] Lichen planus with oral manifestations is predominantly encountered than cutaneous lichen planus and is seen to be comparatively more resistant to treatment. Simultaneous oral and cutaneous manifestations have been seen in 30–50% of the cases.[4] Lichen planus is frequently found in middle and elderly age group, with less than 5% of the patients belonging to the pediatric age group.[5,6] This article reports a rare case of oral lichen planus (OLP) in a 7-year-old girl and emphasizes the importance of its early diagnosis and appropriate management to improve the quality of life in such pediatric patients.

Case Description

A 7-year-old female patient reported to the Department of Oral Medicine and Radiology with a chief complaint of burning sensation in the mouth for past 4 months, which gradually increased in intensity, and associated with difficulty in eating spicy foods. The patient did not give any positive history of pruritus, skin lesions, or burning micturition. Her past medical history and family history were not significant, and her parents did not give any history of long-term drug intake.

On examination of the oral cavity, there were multiple diffuse grayish white raised linear lesions seen on the right and left buccal mucosa, which extended to upper labial mucosa (Figs 1A to C). Multiple white papules-like lesions with radiating lines in the periphery were evident bilaterally in the buccal mucosa. The radiating white lesions were nonscrapable and nontender to palpation. There were no similar lesions on skin or other mucosal surfaces. Correlating the history and oral manifestations, a provisional diagnosis of OLP (reticular type) was given.

Consent was obtained from patient's parents for further investigations. The complete hemogram report showed normal values, and incisional biopsy was done under local anesthesia. The histopathological examination revealed parakeratotic-stratified squamous epithelium with focal areas of basal cell degeneration. The underlying connective tissue showed juxtaepithelial inflammatory infiltrate, which confirmed the diagnosis of OLP (Fig. 2).

The patient was started with topical 0.1% triamcinolone acetonide ointment once daily. Antioxidant-rich diet was recommended, and the parents were explained about the significance of adequate oral hygiene. At 3-month review post treatment, the patient had complete relief from burning sensation, and there was significant reduction in size of the lesions (Figs 1D to F). The patient is currently asymptomatic at 1-year follow-up.

Discussion

Oral lichen planus in the pediatric age group is very rare compared with adults, with very few cases reported in the literature.[5–7] The prevalence of 0.03% is reported for childhood lichen planus and occurs more preferentially in the Asian race. In particular, more number of childhood OLP cases have been encountered in Indian population, the cause of which is yet to be explored.[8] The rare occurrence of lichen planus in the pediatric age group could be attributed to relatively rare occurrence of autoimmune conditions in childhood, less exposure to drugs, dental materials, and environmental agents, which act as triggers in children when compared with adults. A positive family history is more common in childhood lichen planus when compared with adults.[9] The youngest

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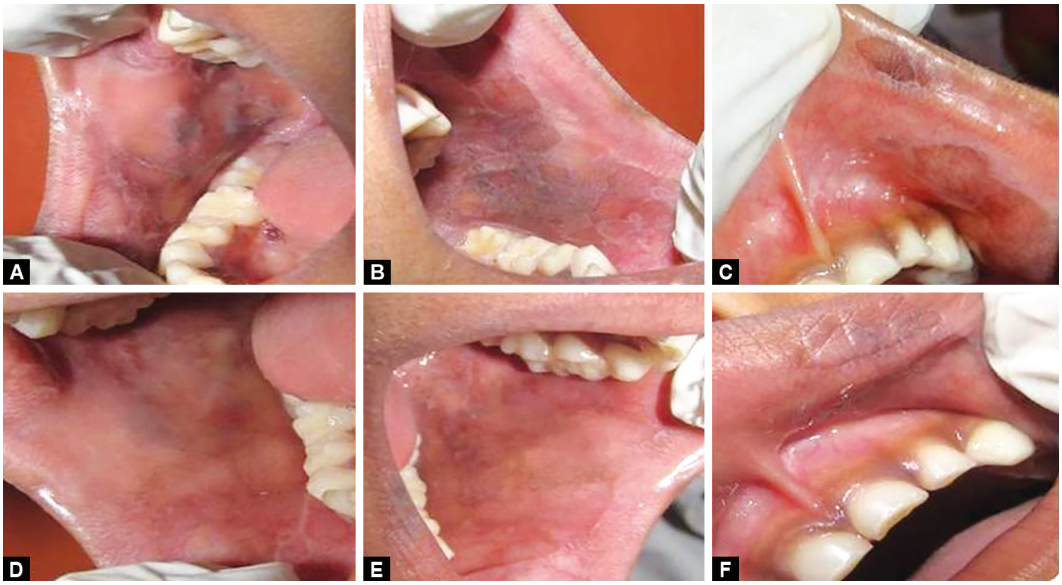
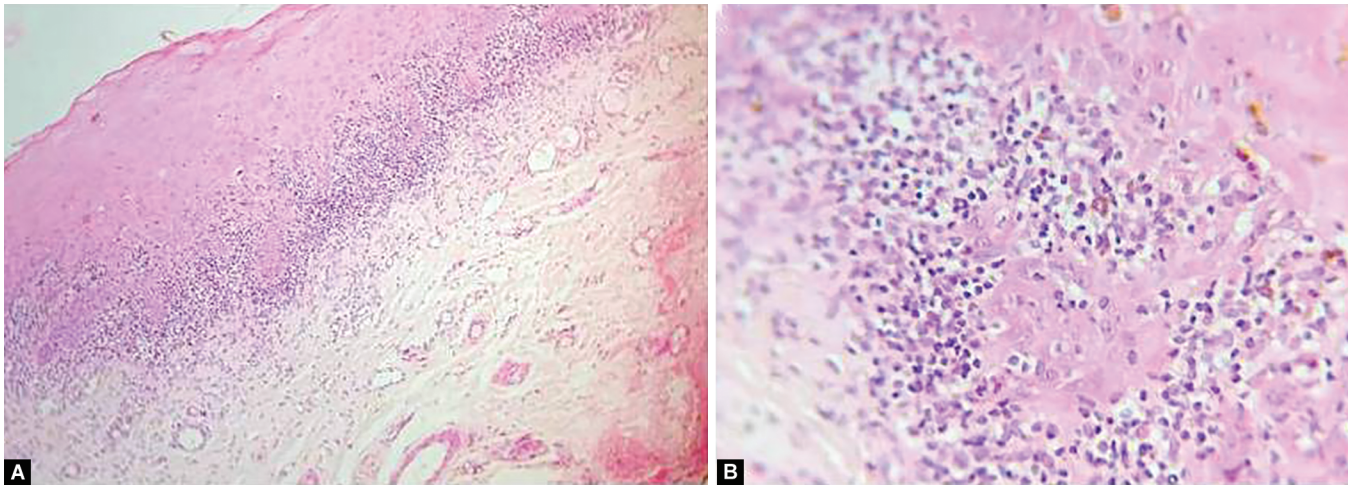


Figs 1A to F: Lesions involving: (A) Right buccal mucosa; (B) Left buccal mucosa; (C) Upper labial mucosa; (D–F) 3 months post treatment showing significant reduction of lesions



Figs 2A and B: Histopathologic sections at 10× and 40× magnification: (A) 10× shows parakeratinized squamous epithelium with features of basal cell degeneration and juxtaepithelial intense chronic inflammatory cell infiltration. The epithelium shows the presence of apoptotic bodies and characteristic saw tooth rete pegs; (B) 40× shows severe degeneration of basal cell layer with lymphocytic infiltration

reported case of OLP is in a 3-month old baby. The age of onset of the disease has been reported to be usually 5–9 years; however, the earliest reported onset has been 2 weeks of age, with more number of cases encountered in boys than girls at the ratio of 2:1.[10,11]

The gender distribution of childhood lichen planus is still controversial with most of the studies reporting equal gender distribution in children.[12,13] Walton et al. in his study showed a female predominance in childhood OLP, with a female to male ratio of 2:1.[6] However, Sharma and Maheshwari reported male predominance in their series.[14]

The exact etiology still being unknown; however, genetic linkage, viral infection, graft vs host disease, and cross-reaction of hepatitis B antigen with keratinocytes during vaccination have been suggested as predisposing factors.[11,15,16] Several studies have reported that the probability for developing OLP is higher in patients with hepatitis C virus (HCV) infection; however, HCV infection is rarely encountered in children.[9]

Oral involvement has been reported to be extremely rare in children compared with cutaneous involvement. Walton et al. in their series showed that out of 36 children who presented with lichen planus, only eight had oral lesions.[6] In a case series of childhood lichen planus involving 100 cases by Kanwar et al.,[17] 17% of the patients presented with oral lesions. In another study in childhood lichen planus by Handa and Sahoo in India, among 87 patients, only a meager seven patients showed concomitant oral involvement and only one child had isolated oral lesion.[18] The most common sites involved in pediatric OLP are buccal mucosa followed by tongue followed by gingiva, which is similar to that in adults.[9,19]

Children presenting with reticular lichen planus, who are asymptomatic, are usually kept under review. Treatment is generally recommended for patients who are symptomatic, or when the lesions are ulcerated or eroded. Topical corticosteroids are the preferred treatment for symptomatic lichen planus because of

their anti-inflammatory action. Other treatment modalities include immunomodulators, retinoids, and surgical excision. Symptomatic relief on application of topical antifungals has also been reported.[20] The prognosis and symptomatic relief with medication are more favorable in childhood lichen planus than that of adults. The controversial aspect of malignant transformation in childhood lichen planus has not been reported.[8]

Conclusion

This article highlights the occurrence of lichen planus in a 7-year-old patient, which is relatively rare and should be included in the differential diagnosis of keratotic lesions even in the pediatric age group.

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