CASE REPORT

Oral lichen planus in child: A rare case report

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Abstract

Lichen planus is a mucocutaneous disease that predominantly affects older patients and occurs less commonly in the pediatric population. This lesion is extremely rare in childhood, and only a few cases have been cited in literature. The treatment was initiated by psychological counseling of parents and the child. The patient was put on topical steroids (triamcinolone acetonide), multivitamins, and antioxidant therapy. A routine comprehensive dental treatment was done, and a regular follow-up was done every week for a period of 3-month. Outcome: At the end of 4 weeks, all lesions resolved and the child was put under follow-up regime for 6 months and no new lesions were detected.

Keywords
Children, lichen planus, mucocutaneous lesions, triamcinolone acetonide

Introduction

Lichen planus is a common chronic inflammatory disease of skin and mucous membranes. It was the first described by Erasmus Wilson in 1869. The etiology of the condition remains obscure, but it appears to be complex and multifactorial. It affects only 0.5-2% of the population. Although it is widely recognized in adults, its occurrence is very low in children a number of etiological factors may be responsible like genetic, immunological, systemic diseases, graft versus host disease, infective agents, medication, hypersensitive dental materials, and stress.[1,2] The pathogenesis may involve the modified basal keratinocytes which may trigger an immune response, and the recruitment of T-lymphocytes may be encouraged by the exaggerated expression of cell surface adhesion molecules.[3] According to Andreason’s classification, it can be classified into reticular, papular, plaque, erosive, atrophic, and bullous.[4] The typical cutaneous lesions of lichen planus are present as flat-topped, purple, polygonal, erosive, atrophic, and bullous.[4] The typical cutaneous lesions of lichen planus may develop as a consequence of numerous types of trauma, such as burns, lacerations, friction, or ultraviolet light.[5] The inclusion criteria for juvenile lichen planus are: [4]

• ≤20 years old
• Clinical evidence of oral lichen planus
• Oral biopsy confirmation
• If no oral biopsy was performed, a clinical description of “reticular” or “reticulate,” “striae” or “lacy” oral lesions was required
• No evidence of mucosal contact with the dental restorative material, no exposure to medications known to induce oral lichenoid reactions.

Case Report

A 9-year-old girl of Asian origin born to non-consanguineous parents reported to the Department of Pedodontics and Preventive Dentistry with a chief complaint of decayed upper right posterior teeth. The patient’s medical and dental history
was non-contributory. The patient had no known history of any systemic or immunocompromised disease. On clinical examination, there were no gross abnormalities seen. Intraoral examination revealed a grayish white lesion measuring about 1 cm in size round to oval in shape on the right and left buccal mucosa [Figure 1a and b]. White interlacing bands were present in the lesion. There was no history of burning sensation. A detailed questioning revealed that the child was under stress by her parents to excel in her exams. On general physical examination, the patient revealed a white mucocutaneous patch on the left arm [Figure 2]. A differential diagnosis of candidiasis, lichen planus, mucous membrane pemphigoid, discoid lupus erythematosus, syphilis, and leukoplakia were made.

The investigations carried out were hematological tests which showed no contributory findings. The other routine investigations like radiographs of carious teeth were carried out. Biopsy of the lesion was taken and histopathologically; it was diagnosed as annular lichen planus [Figure 3].

The treatment was initiated by psychological counseling of parents and the child. The patient was put on topical steroids (triamcinolone acetonide), multivitamins, and antioxidant therapy. A routine comprehensive dental treatment was done, and a regular follow-up was done every week for a period of 3-month. At the end of 4 weeks, all lesions resolved and the child was put under follow-up regime for 6 months and no new lesions were detected [Figure 4a-c].

Discussion

The histopathogy of lichen planus was the first described by Dubreuil in 1906 and then later by Shklar.[2,4] It includes hyperorthokeratosis, acanthosis, thickening of the granular layer, basal cell liquefaction, saw tooth configuration of the rete pegs and band like dense inflammatory cellular infiltrate in the upper lamina propria. Colloid bodies also termed as civatte or Sabouraud’s bodies may be seen in lichen planus.[8]

A detailed history and observation of clinical features usually suffice to establish an appropriate diagnosis. The care and management of patient with oral lichen planus continue to challenge even the most experienced clinician, and robustly suspected associations with chronic liver disease and oral squamous cell carcinoma further to complicate matters. To provide a prudent and competent health care to such patients, it is very necessary for the oral health care providers to have a basic understanding of the impact of disease and also its treatment.[8-10]

Oral lichen planus has been described in children as early as in 1920. The literature review reports only a few cases of childhood oral lichen planus. The reasons of low incidence may be due to failure of diagnosis, lack of clinical symptoms, lack of dental attendance, or failure to report.[3] There is a conflict regarding the clinical features of childhood lichen planus. Some authors have noted that they are similar to adult lichen planus while some authors said children show a linear pattern. In children, it is associated with prolonged skin lesions and is recalcitrant to topical antibiotics.[1,2]

The diagnosis can be obtained by correlating the clinical history with the presence of an area of the characteristic white, reticular, lacy keratotic component. The presence of concurrent skin lesions further strengthens the diagnosis.
There is no cure for oral lichen planus, and treatment strategies are essentially designed to limit progression, reduce exacerbations and relieve symptoms. The treatment plan of the lesion can be divided into surgical and non-surgical therapy. The non-surgical therapy comprises drugs like corticosteroids (topical, intralesional, systemic) like triamcinolone acetonide and hydrocortisone and vitamin supplements and immune modulators like tacrolimus. The surgical therapy comprises of cryosurgery, carbon dioxide laser, and ablation. An adjunctive therapy comprises nystatin, ketoconazole, clotrimazole or fluconazole to treat superinfections with *Candida albicans*. Even though the efficacy of the treatment is not overwhelming, corticosteroid therapy remains the most common approach for managing symptomatic lesions. The treatment should also consist of performing prophylaxis to remove any contributing local factors, restoration of carious teeth, smoothening of rough or sharp cusps to reduce the risk and incidence of isomorphic response.

Conclusion

Although oral lichen planus is considered rare in childhood, the presence of asymptomatic oral lesions should prompt the clinician to such a diagnosis. Finding from our case suggests that the condition may present as clinical lichen planus without any predisposing medical history or positive family history. The role of stress should be taken into account, and untreated dental caries must also alert the clinician toward making a diagnosis of lichen planus.

References
