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REVIEW ARTICLE

ORAL LICHEN PLANUS IN A NINE YEAR OLD FEMALE CHILD PATIENT-A CASE REPORT

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ABSTRACT

Lichen planus is chronic inflammatory mucocutaneous disease usually affecting older individuals but may also affect the children in rare instances. Although, the incidences of the lichen planus in children are a few and mostly reported in Asian countries. This case would highlight about the occurrence of lichen planus in a nine year old girl child with its clinical and histopathological characteristics.

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INTRODUCTION

Lichen planus (LP) is a chronic disease that may affect a wide variety of sites, including the skin and mucous membranes. It is common with the middle aged and elderly population but has rarely been described in children. It is a puritic-papulo squamous dermatoses of auto-immune aetiology characterised by presence of violaceous, flat topped papules or reticular striation associated with burning sensation and discomfort affecting skin, nail, and mucous membranes. Sometimes it is a self-limiting disease heals by variable periods of hyper pigmentation. It is estimated that 50% to 70% of adult LP patients have both skin and oral lesion and approximately 25% of patients present with oral lesions alone. Although, the oral lichen planus demonstrates a clinical variability like papular, reticular, plaque like, ulcerative (erosive), erythematous (atrophic), bullous forms, the reticular form and the erosive form are most commonly reported (Patel, 2005; Scully, 1985; Neville, 2008) Childhood lichen planus is a rare entity with 2-3% of all cases. It has been hypothesized that the rarity of associated autoimmune conditions, exposure to drugs and dental restorative materials, infective agents and other environmental triggers that have been known to initiate lichen planus may be responsible for the overall rarity of lichen planus in children.

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A viral cause, hepatitis C or human herpes virus 7 infecting skin cells has also been suggested But, the incidence of childhood lichen planus is higher in Indian subcontinent as 11%-19% of total lichen planus cases (Alam, 2001). The highest occurrence of childhood lichen planus was also reported from India in past and it was most probably due to differences in genetic background, environmental triggers and or underreporting in several areas. Classical (bilateral symmetrical papules and plaques on lower back, wrist and neck) lichen planus was the most common variant observed in all the reported studies followed by hypertrophic, actinic, and eruptive lichen planus. Post-inflammatory hyperpigmentation is considered to be more intense in childhood lichen planus (Woo, 2007; Edwards, 2002). Although, there is no consensus regarding the management of childhood lichen planus, topical corticosteroids and anti-histamine remain the treatment of choice (Neville *et al.*, 2008; Scully, 1985; Handa, 2002) This paper will highlight about the case of childhood lichen planus in nine year old girl child.

Case Report: A nine year old female patient reported to the department with chief complaint of burning sensation on her mouth during consumption of food for the past 3 months and her parents reported pigmentations on the inner part of her cheek. Patient was found to be systemically healthy with no other abnormalities were found on general systemic examinations. On extra oral examination, no abnormalities or skin rashes were observed.



Fig 1. white reticular mild elevated striation on right posterior vestibule and buccal mucosa.



Fig 2. partially healed lesion with blackish pigmentation left buccal mucosa.



Fig 3. white keratotic dorsum surface of anterior 2/3rd of the tongue of patient.

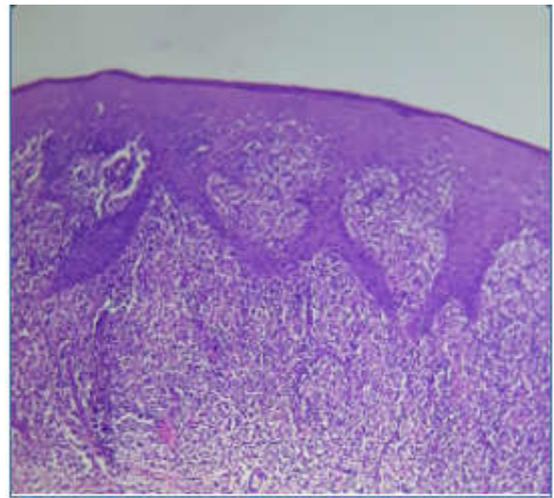


Fig. 4. Section stained with H & E revealed the presence of parakeratotic stratified squamous surface epithelium with underlying fibrovascular connective tissue. Epithelium reveals area of hyperplasia and acanthosis at places (10x)

Intra-oral examination revealed bilaterally greyish-white striations in the posterior buccal vestibules, of both sides extending onto the buccal mucosa (Fig. 1 & 2) and it also involves anterior part of dorsal surface of the tongue. The lesion was flat, non-tender on palpation measuring approximately diffusely distributed (Fig 3). There was no history of any drug intake or allergies as reported by patient's parents. Oral hygiene status was found to be excellent with no amalgam restorations within the oral cavity. So, a provisional diagnosis of reticular type of lichen planus was made based on clinical examinations and patient's complaints. Routine haematological and immunological screening were found to be normal. After considerations of all other factors and taking proper informed consent an incisional punch biopsy was made from the representative site of the lesions under local anaesthesia. The tissue was then sent for histopathological evaluation. Histopathology revealed the presence of saw teeth rete-pegs with chronic infiltrations of lymphocytes. Hyperparakeratosis of stratified squamous epithelium and basal cell degeneration with dense band-linked lymphocytic infiltration at the epithelial-connective tissue interface (Figure 4). Both clinical and histopathological features were consistent with oral lichen planus.

DISCUSSION

There is very little dermatology literature on the subject of juvenile lichen planus, and even fewer reports in the dental literature. Cutaneous LP in childhood is an uncommonly encountered dermatosis and is extremely rare in infancy. Studies of children with mucocutaneous LP have still shown a very low incidence of oral involvement (Cottoni, 1993). Familial LP has been reported as being uncommon. Childhood familial LP is said to occur at an early age and with greater severity. It has been documented that childhood LP is more common in the tropics and that children of Asian origin may be prone to the condition (Cawson, 1998). Figures from India show a wide range from 1-16 to 11.2%, perhaps supporting the suggestion by Ramsey and Hurley that childhood lichen planus is more common in the tropics (Ramsay, 1985). 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. 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.^(12,13) In children, There is rarely complete cure for oral lichen planus, and treatment strategies are essentially focussed 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, smoothing of rough or sharp cusps to reduce the risk and incidence of isomorphic response (Sharma, 1999; Nanda, 2001; Agrawal, 2000).

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 (Agrawal *et al.*, 2000; Mignogna, 2005).

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