



CASE STUDY

GINGIVAL LICHEN PLANUS

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ABSTRACT

Lichen planus is an autoimmune muco-cutaneous condition affecting the skin and oral mucosa. The most common oral sites involved are buccal mucosa and tongue, gingiva being confined to only 10% of the oral presentation of the lesion. The purpose of this case report is to report a case of plaque type lichen planus in a 29 year old male patient with the chief complaint of whitish gum in the upper front tooth region since last 9 months. Histopathologic examination with hematoxylin and eosin stain confirmed the diagnosis of lichen planus on gingiva. Topical application of steroids and surgical excision of the lesion are the treatments of choice for such lesion.

INTRODUCTION

Lichen planus derived from the term lichens, which means lace-like pattern produced by symbiotic relation between the algae and fungi colonies found on rock surfaces. Lichen planus is a common chronic mucocutaneous disease, involving the skin and mucosa. It was first described clinically by Wilson in 1869 and histologically by Dubdreuilhin 1906 (Wilson, 1869). Oral lichen planus (OLP) is a chronic, inflammatory muco-cutaneous condition of unknown etiology, with prevalence between 0.2 - 4% in the population (Małgorzata Radwan-Oczko and Magdalena Mendak, 2011). The usual affected age is between 30-60 years, and it is more frequently seen in females, with male to female ratio of 2:3 (Van der Waal, 2009; Ismail *et al.*, 2007). Intraorally, the buccal mucosa is the most commonly affected site (64.3%), however, the gingiva may be involved with a similar frequency (59.8%), in approximately 10% of the patients the oral lesions are confined to the gingival (Scully and El Kom, 1985). The tongue is involved with decreasing frequency (31.4%) followed by the palate (7.9%) and the lips (5.3%) (Ismail *et al.*, 2007; Plemonset *al.*, 2000; Shaferet *al.*, 2009).

Case report

A 29 year old male patient reported to the department of periodontics and oral implantology with chief complaint of white gums in the upper front tooth region since last 9 months.

Patient showed no relevant medical history and tobacco related habits. Intraoral examination revealed fair oral hygiene and plaque like reticular lesions seen in attached, marginal and interdental gingiva of maxillary right and left central incisor region (Figure 1). The lesions in maxillary central incisor regions were plaque like atrophic (keratotic changes with mucosal erythema) in distribution with erythematous areas present in the interdental areas (confined only to the gingiva). Based on the clinical appearance a provisional diagnosis of atrophic lichen planus of gingiva was established.

Investigations

Hematologic investigation and excisional biopsy was advised. An excisional biopsy was obtained from maxillary anterior tooth region of the attached gingiva under local anesthesia after thorough oral prophylaxis (Figure 2).

Histopathology (Figure 3)

Histopathologic examination with hematoxylin and eosin staining showed hyperkeratotic stratified squamous epithelium along with basal cell degeneration at few places. A band of chronic lymphocytic infiltration is seen juxtaepithelially throughout the sections. Deeper areas of connective tissue shows presence of parallelly arranged collagen fibers with few blood vessels. This histopathologic features were suggestive of lichen planus.

Treatment

Patient was advised to use topical kenacortOrabase 0.1% ointment (triamcinolone acetonide) followed by excisional biopsy.



Figure 1. Preoperative view of plaque like OLP lesion in maxillary right central incisor region



Figure 2. Excisional biopsy of the lesion performed under local anesthesia

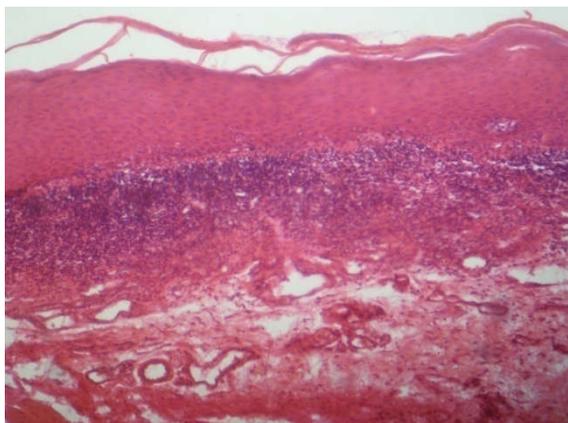


Figure 3. Histopathology



Figure 4. 6 months follow up with no recurrence

Results with follow up (Figure 4)

No recurrence of lesion occurred after 6 months of follow up.

DISCUSSION

The present case report describes a case of atrophic gingival lichen planus. Lichen planus is a benign mucocutaneous condition. Among the various forms of OLP (reticular, patch, atrophic, erosive, and bullous), atrophic lichen planus is not as common as the reticular form, but it is of more clinical significance for the patient as these lesions are mostly symptomatic. In the present case, patient showed atrophic, erythematous areas, with central ulceration of varying degrees on the gingiva. The etiology of lichen planus involves a cell-mediated immune response which induces degeneration of the basal cell layer of the epithelium (Greenberg and Glick, 2003). Mental stress, malnutrition, infection (viral), mechanical trauma and tobacco use are the precipitating factors of OLP (Lundqvist *et al.*, 2006; LiveiraAlves *et al.*, 2010). OLP with manifestation confined to the gingiva may be clinically characterized by presence of erythema (atrophic lichen planus), presence of ulcerations (erosive and/or ulcerated lichen planus), or vesiculobullous lesions (bullous lichen planus) (Salgado *et al.*, 2013). The rate of malignant transformations is demonstrated to be between 0.3%–10% (Holmstrup *et al.*, 1988). OLP may be associated with pain or burning sensation and discomfort, which interferes with the mastication (Greenberg and Glick, 2003). The differential diagnosis of OLP, presenting as white patches or hyperkeratosis, is broad and includes lichenoid lesions, leukoplakia, lupus erythematosus, chronic ulcerative stomatitis, and malignancy (Greenberg and Glick, 2003). The treatment for OLP is usually directed towards the relief of symptoms and remission of the lesions. Surgical excision, cryotherapy, CO₂ laser, Nd:YAG laser has been used in the treatment of OLP. (Jayachandran and KojiamSashikumar, 2012) Photochemotherapy, corticosteroid, immunosuppressants, retinoids are also the treatments of choice for such lesions (Jayachandran and KojiamSashikumar, 2012). Initially patient was advised to use topical corticosteroids i.e., kenacortOrabase 0.1% ointment. Topical corticosteroids are commonly used in the treatment of oral LP to reduce pain and inflammation. Triamcinolone acetonide is frequently used either in Orabase or as lozenges with the beneficial effect. A number of investigations have determined the efficacy of triamcinolone acetonide 0.1% suspension in the treatment of OLP (Lodi *et al.*, 2005).

Conclusion

In spite of correct diagnosis and the treatment plan, management of these cases remains challenging for the clinician. Further research is required to provide appropriate treatment for these patients.

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