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ORAL LICHEN PLANUS-A CASE REPORT

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ABSTRACT

Oral lichen planus (OLP) is an autoimmune, mucocutaneous disease affecting oral mucosa, skin, scalp, genital mucosa and nails. The exact etiology of this disease is not yet known, but stress, drugs, dental fillings, genetic factors, immunity, and hyper-sensitivity reactions can contribute to its pathogenesis. Clinically, the lesions are usually multiple and bilateral and appear on various sites of the oral cavity. The disease mostly affects middle-aged females and is infrequently found in children. The atrophic and erosive forms of OLP are less common. Histologically, the lesions usually show both atrophy and acanthosis of the squamous epithelium along with the “sawtooth” pattern of the rete ridges, with a hydropic degeneration of the basal layer. Here we present to you a case of lichen planus in a 44 year old female patient who visited the dental hospital with the complaint of burning sensation on the right and left buccal mucosa.

KEYWORDS:Oral lichen planus (OLP), Lichen planus (LP), Saw tooth rete ridges, Wickham's Striae

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INTRODUCTION

Lichen planus (LP) is a chronic immune-mediated inflammatory disease that affects the skin and mucous membranes. OLP is the mucosal counterpart of cutaneous lichen planus and it was first described in 1866 as white papular eruptions in the oral cavity [1]. OLP is reported to occur in 0.5-2.2% of the population, with a peak incidence in the 30-60 years age range and with a female predominance of 2:1 [2]. The etiology of lichen planus remains uncertain, but many factors have been implicated including genetic, infective agents, drug reactions, systemic diseases, hypersensitivity to dental material and vitamin deficiencies. OLP is classified into reticular, atrophic, erosive and bullous types [3]. Classically, it appears in a roughly symmetrical distribution of well-defined white striations on a background of mild erythema, commonly involving the buccal mucosa and tongue [1]. Clinically, the distribution is symmetrical, with well-defined white striations on a slightly erythematous background that frequently involves the tongue, and buccal mucosa [4]. The classical lichen planus has five major histological features: hyperkeratosis, hypergranulosis, acanthosis, heavy band-like lymphocytic infiltrate in upper dermis and hydropic degeneration of epidermal basal layer [5].

CASE REPORT

A 44 years old female patient visited the dental hospital with the chief complaint of burning sensation on the left and right buccal mucosa. The patient gave no history related to her habits. On clinical examination, white keratotic striae were observed on the right and left buccal mucosa and the ventral surface of the tongue [Figure 1].

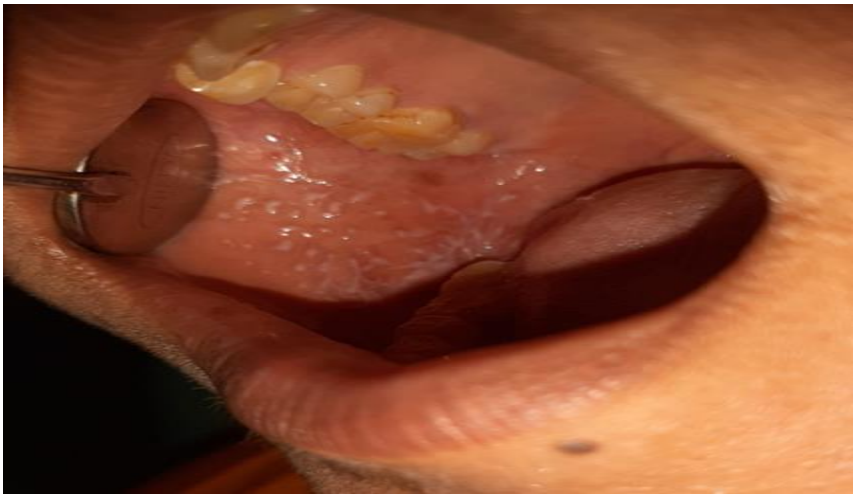

Figure 1: clinical picture of the patient with oral lichen planus

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A biopsy was taken and sent for histopathological confirmation of lichen planus. On Gross examination, a single bit of soft tissue was observed which measured around 1x1x0.8cms. It was irregular in shape, brownish in color and had a soft consistency [Figure 2].

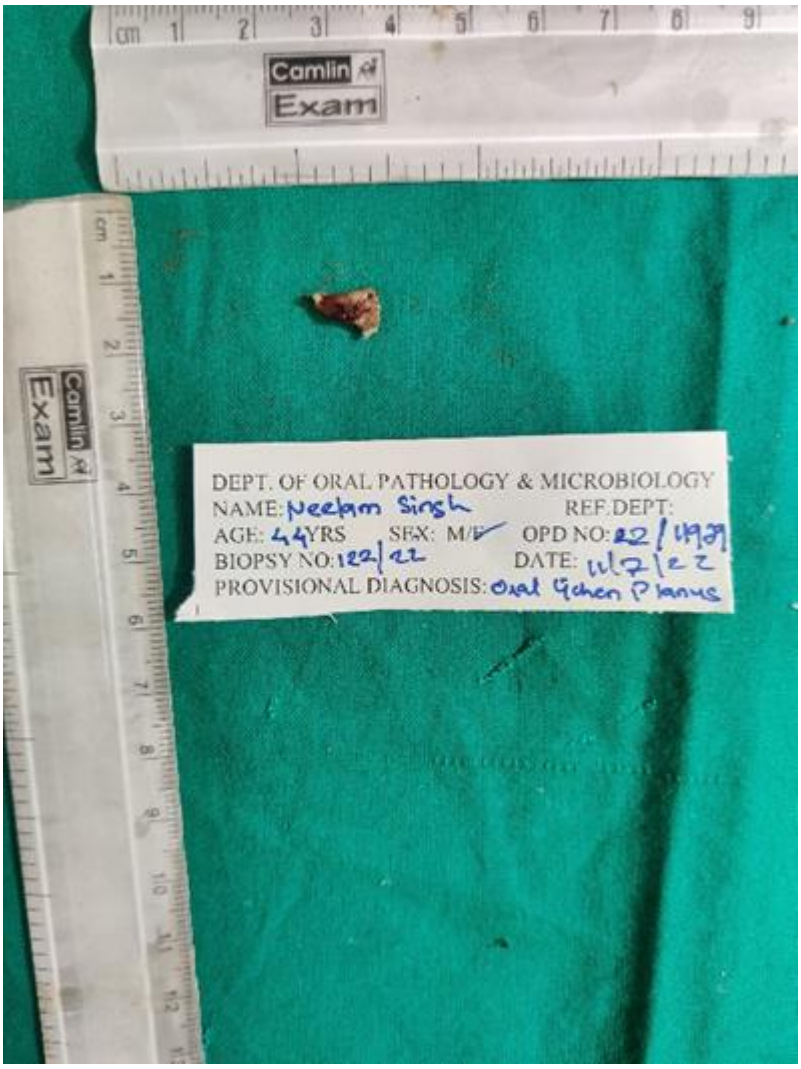

Figure 2: grossing image of the soft tissue after biopsy

On microscopic examination, the H&Estained section shows stratified squamous hyperparakeratinized epithelium overlying connective tissue stroma. Epithelium showed acanthosis, degeneration of the basal layer of cells and saw tooth rete pegs. Juxtaepithelial band of dense inflammatory cell infiltrate was observed. Extravasated RBCs along with muscle bundles was also noted [Figure 3 (A & B)].

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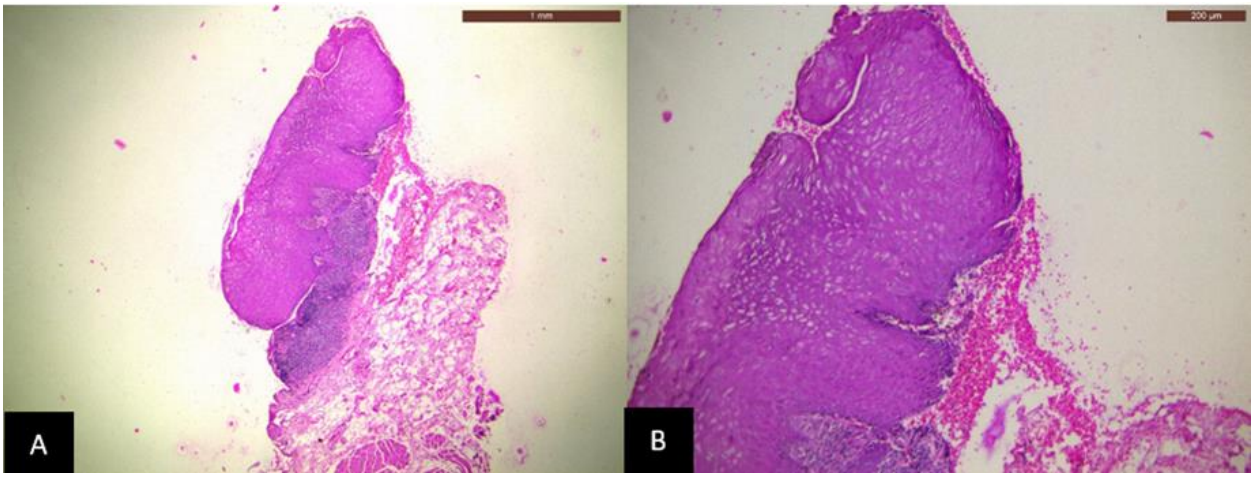

Figure 3 (A & B): H&E stained sections show stratified squamous hyperparakeratinized epithelium overlying connective tissue stroma. Epithelium shows acanthosis, degeneration of basal layer of cells and saw tooth rete pegs. Juxtaepithelial band of dense inflammatory band infiltrate. Extravasated RBC's and Muscle bundles are also seen.

DISCUSSION

Lichen planus was first described by Eramus Wilson in 1869 as predominantly a disease of the middle-aged. It is a chronic T-cell mediated autoimmune disease, affecting the skin, oral mucosa, genital mucosa, scalp, and nails [6]. OLP affects 0.5-2.0% of the general population and is seen in the fourth to sixth decade of life. The lesion is frequently present in women [7]. The present case is a case of a 44 years old female who complained of burning sensation in the oral cavity.

The exact etiology of this disease is not yet known, but stress, drugs, dental fillings, genetic factors, immunity, and hyper-sensitivity reactions can contribute to its pathogenesis. OLP is mediated by T-cells, chiefly CD8-positive T-cells that release various cytokines like tumour necrosis factor alpha (TNFα) and interleukin-12 (IL-12), which causes the perturbation of the basement membrane integrity [8]. An association between lichen planus and hepatitis C infection has been suggested, with a concomitant geographic influence or cofactor proposed [3]. Clinically, the lesions are usually multiple and bilateral and appear on various sites of the oral cavity. Some other clinical studies reported different types of lesions: bullous-like, papular, erosive, and atrophic [4]. Lichen planus is characterized by lesions consisting of radiating white, gray, velvety, thread-like papules in a linear, annular and retiform arrangement forming typical lacy, reticular patches, rings and streaks. A tiny white elevated dot is present at the intersection of white lines

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known here as striae of Wickham [9]. In the present case, the lesion appears as white keratotic striations on the right and left buccal mucosa and the ventral surface of the tongue.

The history, typical oral lesions and skin or nail involvement are usually sufficient to make a clinical diagnosis of OLP. However, a biopsy is the recommended procedure to differentiate it from other lesions [9].

The classic histopathologic features of OLP include liquefactive degeneration of the basal cell accompanied by apoptosis of the keratinocytes, a dense band-like lymphocytic infiltrate at the interface between the epithelium and the connective tissue, focal areas of hyperkeratinized epithelium (which give rise to the clinically apparent Wickham's striae) and occasional areas of atrophic epithelium where the rete pegs may be shortened and pointed (a characteristic known as saw tooth rete pegs). Eosinophilic colloid bodies (Civatte bodies), which represent degenerating keratinocytes, are often visible in the lower half of the surface epithelium [9]. In the present case, the H&Estained section shows stratified squamous hyperparakeratinized epithelium overlying connective tissue stroma. The epithelium showed acanthosis, degeneration of the basal layer of cells and saw tooth rete pegs. Juxtaepithelial band of dense inflammatory cell infiltrate was observed which consisted mainly of lymphocytes.

The OLP lesions are consistently more persistent than the dermal lesions and have been reported to carry a risk of malignant transformation to oral squamous cell carcinoma (OSCC) of 1-2% (reported range of malignant transformation 0– 12.5%) but different controversies prevail around this topic [10].

The principal aims of current treatment therapy are the resolution of painful symptoms, oral mucosal lesions, the reduction of the risk of oral cancer, and the maintenance of good oral hygiene. Eliminate the local exacerbating factors as preventive measures. Use of novel drug therapy is the most common method for treatment of OLP [9]. Different drugs have been used in the form of topical and systemic application for the treatment of OLP. Drugs used in topical form are corticosteroids, immunosuppressives, retinoids, and immunomodulators. Drugs which are used systemically are thalidomide, metronidazole, griseofulvin, and hydroxychloroquine, some retinoids and corticosteroids. Surgical excision, cryotherapy, CO2 laser, and ND: YAG laser have all been used in the treatment of OLP. In general, surgery is reserved to remove high-risk dysplastic areas [2].

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The differential diagnosis includes drug-related lichenoid eruptions, lichenoid lesions caused by the contact with restorative dental materials, leukoplakia, lupus erythematosus [4].

CONCLUSION

OLP is a very common oral dermatitis and is one of the most frequent mucosal pathoses encountered by dental practitioners. It is imperative that the lesion is identified precisely and proper treatment be administered at the earliest. A proper understanding of the pathogenesis, clinical presentation, diagnosis of the disease becomes important for providing the right treatment.

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