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Erosive Oral Lichen Planus: A Case Report

Dr. Rma Arya

MDS, Department of periodontology, Post Graduate Institute of Dental Sciences, Rohtak, Haryana, India

ABSTRACT

Oral lichen planus (OLP) is a chronic immune-mediated mucocutaneous disorder. Among its clinical variants, the erosive form is particularly symptomatic and may be associated with an increased risk of malignant transformation. Coexistent periodontal disease may complicate the clinical picture by exacerbating inflammation and impeding healing. This report describes the case of a 35-year-old male with histopathologically confirmed erosive OLP and concurrent mild chronic periodontitis. Multidisciplinary management involving topical corticosteroids and non-surgical periodontal therapy resulted in significant clinical improvement. This case underscores the importance of periodontal evaluation and intervention as an integral component of OLP management.

Key words: Periodontitis, squamous cell carcinoma, malignant, desquamation, dental plaque

INTRODUCTION

Oral lichen planus (OLP) is a chronic T-cell-mediated inflammatory disorder affecting the oral mucosa, with a prevalence of 0.5–2%.[1] It is more common in females and typically presents in the fourth to sixth decades of life.[2] Clinically, OLP manifests in several forms: reticular, papular, plaque-like, atrophic, bullous, and erosive—the latter being the most painful and clinically significant due to its potential for malignant transformation.[3] OLP has been classified by the World Health Organization (WHO) as a potentially malignant disorder.[4]

Periodontal disease is a prevalent chronic inflammatory condition affecting the supporting structures of teeth.[5] The coexistence of OLP and periodontal disease is not uncommon and presents a therapeutic challenge. Pain from erosive lesions often limits effective oral hygiene, which can lead to plaque accumulation and exacerbate both conditions.[6] This case report details the diagnosis and management of erosive OLP in a 35-year-old male, emphasizing the role of periodontal intervention in improving patient outcomes.

CASE REPORT

A 35-year-old male presented to the Department of Oral Medicine with complaints of burning sensation and painful ulcerations in the mouth for the past three months. The pain was continuous, aggravated by spicy and acidic foods, and was interfering with his ability to eat and maintain oral hygiene. His medical history was non- contributory and extraoral examination revealed no abnormalities. Patient did not give history of any medications or allergies. Patient was non-smoker and occasional alcohol user. There was no history of prior dermatologic or mucosal lesions. Occupation-related stress was reported.

Intraoral examination revealed bilateral erosive and erythematous lesions on the buccal mucosa, dorsolateral borders of the tongue and on the marginal gingiva. The lesions were irregular in shape, shallow, with surrounding interlacing white striations (Wickham's striae). Generalized erythematous gingiva and poor oral hygiene were noted. No cutaneous or extraoral manifestations were observed. Differential diagnosis included oral lichenoid reaction, pemphigus vulgaris, mucous membrane pemphigoid and chronic ulcerative stomatitis. An incisional biopsy was taken from the left buccal mucosa. Histological evaluation revealed: hyperkeratosis with irregular acanthosis, "Saw-toothed" rete ridges, degeneration of basal keratinocytes, dense, band-like lymphocytic infiltrate at the epithelial-connective tissue interface and civatte (colloid) bodies in the basal layer. A final diagnosis of erosive oral lichen planus was made based on clinical and histological findings.

Periodontal Examination revealed plaque index: 2.1 (moderate), gingival index: 2.0 (moderate inflammation), probing pocket depths: 3–4 mm generalized, with isolated 5 mm pockets, generalised bleeding on probing (BOP) present in >30% of sites, clinical attachment loss: 1–2 mm, tooth mobility: Grade I in lower incisors. According to AAP 2017, the case was diagnosed as Generalized Stage I, Grade A periodontitis. Phase 1 therapy included full-mouth scaling and root planing (SRP). Oral hygiene instructions were given with emphasis on soft-bristle toothbrush, fluoridated non-abrasive

toothpaste and modified bass brushing technique. Chlorhexidine mouthwash (0.12%) twice daily was advised for 14 days. Topical corticosteroid was advised to be applied twice daily to affected areas. Patient was recalled weekly for complete oral prophylaxis for 1 month. Thereafter, patient was reevaluated 4 weeks post-treatment wherein significant reduction in gingival inflammation and plaque indices was observed. There was significant improvement in oral hygiene compliance and substantial symptomatic relief and resolution of erosive areas with residual striae was observed. Patient was advised to maintain periodontal recall visits every 3 months. Regular surveillance of oral mucosa for dysplastic changes or recurrence was observed.

DISCUSSION

Erosive oral lichen planus (OLP) represents a significant clinical challenge owing to its chronic, relapsing nature, symptomatic presentation, and potential for malignant transformation into oral squamous cell carcinoma.[7] While the condition predominantly affects middle-aged females, recent literature suggests an increasing incidence among younger males, highlighting the need for heightened awareness and tailored management strategies across broader demographics.[8]

Periodontal disease often coexists with erosive OLP, creating a complex clinical scenario. The relationship between these conditions is bidirectional: chronic plaque-induced gingival inflammation can potentiate the mucosal immune dysregulation seen in OLP, while the painful, ulcerated lesions characteristic of the erosive form hinder effective oral hygiene practices.[9] This cyclical interplay contributes to the persistence of inflammation and complicates disease control.

Accurate diagnosis of erosive OLP relies heavily on histopathological confirmation. While clinical presentation offers valuable clues, especially when Wickham's striae or bilateral symmetrical lesions are present, biopsy remains the gold standard. Histopathological hallmarks such as basal cell degeneration, band-like lymphocytic infiltration in the lamina propria, and saw-tooth rete ridges help distinguish OLP from other vesiculobullous or immune-mediated mucosal diseases.[10]

Topical corticosteroids are the cornerstone of OLP management, effectively reducing inflammation and promoting healing.[11] In cases of secondary candidiasis or fungal overgrowth—often precipitated by immunosuppressive therapy—adjunctive antifungal agents are warranted.[12] However, pharmacological management alone may be insufficient in the presence of active periodontal disease.

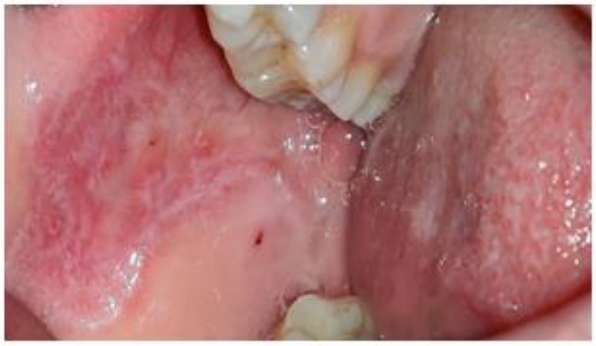
Addressing periodontal inflammation through nonsurgical therapy, including scaling and root planing, is essential. This intervention helps eliminate local irritants and reduces antigenic load from bacterial plaque biofilms, thereby lowering mucosal immune activation.[13] Several studies support the synergistic benefits of combining periodontal therapy with corticosteroid treatment, reporting improved symptom control, decreased lesion severity, and enhanced overall patient comfort.[14] Moreover, reducing plaque burden may decrease the risk of further epithelial damage and long-term complications.

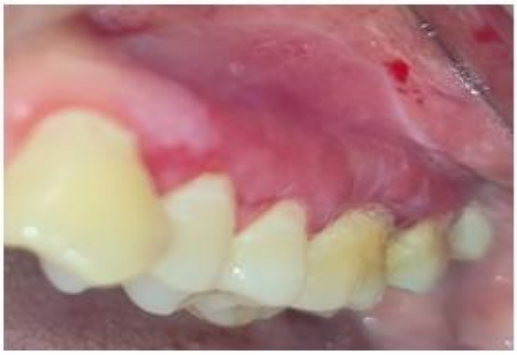
In summary, a multidisciplinary approach that integrates periodontal therapy with standard OLP pharmacologic management not only enhances therapeutic outcomes but also improves oral function and quality of life. Early diagnosis, regular monitoring and tailored interventions are key to controlling disease progression and minimizing complications, including the risk of malignant transformation.

CONCLUSION

This case highlights the critical role of thorough periodontal evaluation and management in patients with erosive oral lichen planus (OLP). Effective control of periodontal inflammation not only alleviates symptoms but also promotes mucosal healing and improves overall oral health. An integrated, multidisciplinary approach encompassing patient education, meticulous oral hygiene, and regular follow-up is essential to optimize therapeutic outcomes and to enable early detection of potential malignant transformation. Long-term surveillance remains a cornerstone in managing the chronic and potentially progressive nature of erosive OLP.

CLINICAL PICTURES





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