

Reticular Oral Lichen Planus Successfully Managed with Topical Clobetasol: A Case Report

ABSTRACT

Aim: This case report describes the clinical presentation and short-term management of a symptomatic case of reticular oral lichen planus involving the buccal and labial mucosa, with additional keratotic patches on the dorsal tongue.

Case Presentation: A 35-year-old female patient reported with a three-month history of burning sensation in the oral cavity. The discomfort was aggravated by spicy and hot foods and was recorded as 8/10 on the visual analogue scale. The patient had no relevant medical history, deleterious habits, history of trauma, or cheek-biting habit. Intraoral examination revealed bilateral, lace-like, non-scrapable white striations on the buccal mucosa, extending toward the pterygomandibular region. Similar striae were also observed on the upper and lower left labial mucosa. Two small white keratotic patches, each measuring approximately 0.5 cm, were present on the dorsal surface of the tongue. The lesions were non-tender, flat, and showed no evidence of induration. Based on the clinical findings, a provisional diagnosis of reticular oral lichen planus was made.

Management and Outcome: The patient was advised topical clobetasol propionate 0.05% application three times daily for 15 days, along with avoidance of spicy and hot foods. Referral for evaluation of stress and sleep disturbance was also advised. At 30-day follow-up, the burning sensation reduced from 8/10 to 3/10. Partial regression of reticular striations and reduction in erythema were observed, although residual pigmentation persisted.

Conclusion: This case highlights that reticular oral lichen planus, although often asymptomatic, may present with significant burning sensation. Topical corticosteroid therapy, dietary modification, and supportive multidisciplinary care may help achieve short-term symptomatic improvement. Continued follow-up is required because of the chronic and recurrent nature of the condition.

1. INTRODUCTION

Oral Lichen Planus (OLP) is a chronic inflammatory mucocutaneous disorder of probable autoimmune origin that primarily affects the oral stratified squamous epithelium.¹

It is widely accepted to be mediated by a T-cell driven immune response, resulting in basal keratinocyte apoptosis and chronic mucosal inflammation.^{1,2}

The global prevalence of OLP is estimated to range between 0.5% and 2%, with a predilection for middle-aged females.²

Among intraoral sites, the buccal mucosa is most frequently involved, often showing bilateral and symmetrical distribution with characteristic Wickham's striae.³

Clinically, OLP presents in multiple forms such as reticular, erosive, atrophic, papular, and plaque-like variants, of which the reticular type is the most commonly encountered.^{3,6}

Although reticular OLP is typically asymptomatic, a subset of patients may experience burning sensation, particularly when exposed to spicy, hot, or acidic dietary irritants.⁴

Recent literature also suggests a strong association between psychosocial stress, sleep disturbances, and exacerbation of OLP symptoms, indicating a possible neuro-immunological component in disease expression.⁵

Because of its chronic nature and potential for symptom fluctuation, OLP requires long-term monitoring and individualized therapeutic strategies, especially in symptomatic cases.⁴

Topical corticosteroids remain the first-line treatment for symptomatic OLP due to their potent anti-inflammatory and immunosuppressive effects on T-cell mediated mucosal damage.⁵

2. CASE PRESENTATION

A 35-year-old female patient reported to the Department of Oral Medicine and Radiology in Sinhgad Dental hospital , pune with a chief complaint of burning sensation in the oral cavity for the past three months. The burning sensation was moderate to severe in intensity (VAS score: 8/10) and was aggravated on consumption of spicy and hot food. There was no relevant medical history, no deleterious habits, and no history of trauma or cheek biting. Dental history revealed only previous dental extractions.

Clinical examination revealed two small white patches on the dorsal surface of the tongue measuring approximately 0.5 cm each(fig 1).



Fig 1 Patches on tongue

Bilateral lace-like, reticular white striations were present on the right and left buccal mucosa, On right buccal mucosa striae seen on pterygomandibular raphe and left buccal mucosa, extending from the corner of the mouth to the pterygomandibular raphe. The lesions measured approximately 6 × 2 cm on the right side (fig 2 A) and 3 × 2 cm on the left side (fig 2 B).

Striae were also observed on the **lower left labial mucosa**, opposite the region of the canine and first premolar teeth, extending for approximately **1 cm (fig 3 A)**.



Fig 2 A-striae on left buccal mucosa B-striae on right buccal

Similar striae were noted on the **upper left labial mucosa**, opposite the lateral incisor and canine teeth region, measuring approximately **2 cm in length**. (fig 3B)

The lesions were non-scrapable and non-tender on palpation, with no induration, and the only presenting symptom was burning sensation. The margins were irregular but flat.

Based on the clinical findings, a provisional diagnosis of Oral Lichen Planus (reticular type) was made

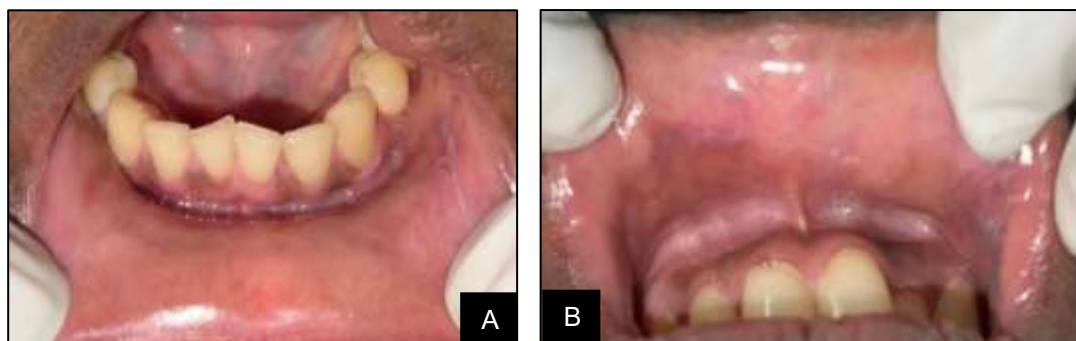


Fig. 3. A- striae on upper left labial mucosa B-striae on lower left labial mucosa

2.1 Management and follow-up

- Clobetasol propionate 0.05% topical application three times daily for 15 days
- Advised avoidance of spicy and hot food

- Referred to the psychiatry department for evaluation of sleep cycle disturbance and stress management

At 30-day follow-up, the patient showed marked improvement in symptoms. The burning sensation reduced significantly, with the VAS score decreasing from 8 to 3. Clinically, partial regression of reticular striations and reduction in erythema were observed. However, **residual pigmentation was still present** on the affected buccal mucosa, indicating incomplete resolution of the lesion.(fig 4A & B)



Fig 4 A & B Follow up

Differential Diagnosis

- 1.Oral Lichenoid Lesions / Lichenoid Reaction^{6,7}
2. Oral leukoplakia⁸
3. Frictional Keratosis⁹
4. Discoid Lupus Erythematosus (DLE)^{6,10}
5. White Sponge Nevus¹⁰
- 6.Oral Graft Versus Host Disease (GVHD)⁶

3. DISCUSSION

Oral Lichen Planus (OLP) is a chronic immune-mediated inflammatory disorder of the oral mucosa, with a well-established T-cell-mediated pathogenesis. It is characterized by cytotoxic CD8+ lymphocyte attack against basal keratinocytes, leading to apoptosis and degeneration of the basal cell layer. This immune dysregulation results in a chronic relapsing–remitting disease pattern affecting oral mucosal integrity.⁹ Epidemiologically, OLP demonstrates a prevalence of approximately 0.5% to 2%, with a marked predilection for middle-aged females, typically in the fourth to sixth decade of life.¹³

Hormonal influences, immune modulation, and psychosocial factors have all been suggested as contributing elements in its etiopathogenesis.¹⁴

Clinically, OLP presents in multiple forms including reticular, erosive, atrophic, plaque-like, papular, and bullous variants. Among these, the reticular type is the most frequently encountered and is characterized by interlacing white keratotic lines

known as Wickham's striae. These lesions are most commonly seen on the buccal mucosa in a bilateral and symmetrical distribution, which is considered highly suggestive of OLP.^{6,9,10}

Although reticular OLP is often asymptomatic, a subset of patients may present with burning sensation, particularly when exposed to thermal, spicy, or acidic dietary triggers.⁴ The presence of burning symptoms in reticular lesions, as observed in the present case, may be attributed to subtle epithelial barrier disruption or subclinical inflammatory activity.⁴

Psychological stress, anxiety, and sleep disturbances have been increasingly recognized as important modifying factors in OLP. Studies suggest that psychoneuroimmunological interactions may influence disease onset, severity, and recurrence, possibly through altered cytokine expression and immune response modulation. This supports the multidisciplinary approach adopted in the present case, including psychiatric referral.¹³

Histopathologically, OLP is characterized by saw-tooth rete ridges, liquefaction degeneration of the basal cell layer, Civatte (colloid) bodies, and a dense band-like lymphocytic infiltrate at the epithelial–connective tissue interface. While biopsy remains the gold standard for confirmation, classic clinical presentation such as bilateral reticular striations often allows for clinical diagnosis without invasive procedures.^{6,7}

Management of symptomatic OLP primarily involves topical corticosteroids, which remain the first-line therapeutic agents. High-potency corticosteroids such as clobetasol propionate act by suppressing T-lymphocyte activation, cytokine release, and inflammatory mediator production. Clinical studies have demonstrated significant improvement in both symptomatic relief and lesion regression with topical corticosteroid therapy.^{7,14}

In addition to pharmacological therapy, elimination of local irritants and patient counseling play an important role in disease control.⁷

Long-term follow-up is essential, as OLP is a chronic relapsing condition with a low but documented risk of malignant transformation, particularly in erosive and atrophic forms. Therefore, regular monitoring is recommended even in clinically stable cases.

Conclusions

This case describes a symptomatic presentation of reticular oral lichen planus in a 35-year-old female patient with bilateral buccal mucosal involvement, labial mucosal striations, and small keratotic patches on the dorsal tongue. The patient presented with a three-month history of burning sensation that was aggravated by spicy and hot foods. Clinical examination showed non-scrapable, non-tender, lace-like white striations without induration, supporting a provisional clinical diagnosis of reticular oral lichen planus. Management with topical clobetasol propionate 0.05% for 15 days, avoidance of dietary irritants, and referral for stress and sleep-related evaluation was associated with symptomatic improvement at 30-day follow-up. The visual analogue scale score decreased from 8/10 to 3/10, and partial clinical regression of the lesions was observed. However, residual pigmentation remained, indicating incomplete resolution. The case emphasizes the importance of early recognition of characteristic oral lesions, symptomatic management, patient counseling, and follow-up. As oral lichen planus is a chronic condition with possible recurrence, continued monitoring remains necessary even after symptomatic improvement.

CONSENT (WHERE EVER APPLICABLE)

As per international standards or university standards, patient(s) written consent has been collected and preserved by the author(s).

ETHICAL APPROVAL (WHERE EVER APPLICABLE)

As per international standards or university standards written ethical approval has been collected and preserved by the author(s).

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