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IP International Journal of Maxillofacial Imaging

Journal homepage: https://www.ijmi.in/

Review Article

Oral lichen planus: An overview

Khumukcham Sophia[1], CH Anupriya[2], Mutum Sangeeta Devi[3]*

[1]*Jawaharlal Nehru Institute of Medical Sciences, Imphal, Manipur, India*
[2]*Dental College, RIMS Imphal, Imphal, Manipur, India*
[3]*Tata Medical Center, Kolkata, India*

ARTICLE INFO

Article history:
Received 16-11-2023
Accepted 19-12-2023
Available online 01-01-2024

Keywords:
Oral lichen planus
Wickham striae
Erosive
Erythematous
Burning

ABSTRACT

Oral lichen planus (OLP) is an immune-related disorder with an exact etiology unknown. It is a chronic inflammatory disease characterized by relapses and remission. Regular follow-up and keeping under observation are required as this lesion poses a chance for malignant transformation. In this article, we will discuss the various treatment modalities available for Oral Lichen Planus.

1. Introduction

Lichen planus (LP) is a chronic inflammatory mucocutaneous disease linked to immune-mediated pathogenesis. The oral mucosa is the place most frequently affected, but it can also affect the skin, scalp, vaginal mucosa, and nails. Lesions in other sites are uncommon in the majority of Oral Lichen tiplanus (OLP) cases. The incidence of OLP varies throughout the global population, ranging from 0.5% to 2.6%.[1,2]

Clinically, LP may manifest as open sores, swollen, red tissues, or itchy, lacy, white areas. Burning, pain, and other discomforts could be experienced from these lesions. The lesions may show up on the palate, gingiva, tongue, inner tissues of the lips, or the inside of the cheeks. The term "lichen" refers to a plant with a mossy, weblike appearance that is frequently observed growing on rocks.[3,4]

Although the exact cause of the condition is still unknown, various risk factors have been linked to it, including genetic predisposition, stress, medicines, hypertension, dental materials, infections, neoplasms, and autoimmune and intestinal problems. Although the origin of this condition is not entirely understood. The lymphocytic attack on the keratinocytes in the mucosal basal layer is the primary occurrence. T By producing chemokines at the site of inflammation, lymphocytes cause cell death and degeneration and sustain the process.[5,6]

2. Clinical Features

OLP typically has many foci and almost always has a bilaterally symmetric pattern. They are a mixture of white and red lesions. The buccal mucosa is the most often impacted area, while some cases also involve the tongue, gingivae, and lower lip. The palate, oral floor, and upper lip lesions are uncommon.

Red lesions can have an atrophic (erythematous), erosive (ulcerated), or bullous-like look, whereas white lesions exhibit reticular, papule, or plaque-like features. OLP can be split into the six varieties indicated above (reticular, papule, plaque, atrophic, erosive, and bullous types), or into two types, white and red, albeit reticular, atrophic, and erosive

* *Corresponding author*.
E-mail address: mutumsangeeta21@gmail.com (M. S. Devi).

https://doi.org/10.18231/j.ijmi.2023.030

are the three most frequently identified forms. Because lesions are not uniform, some instances may display a mix of these clinical categories. Typically, white lesions develop against a background of widespread erythema. The most frequent form of OLP, known as the reticular form, exhibits Wickham's striae, a network of thin white lines that resembles lace.

Leukoplakia-like, uniformly white spots are how plaques manifest. The buccal mucosa and the dorsum of the tongue are frequent locations for this morphology to be seen. Plaque forms may be distinguished from leukoplakia if they have striation. Rarely observed, the papular form comprises of tiny white lesions.[7–14]

3. Treatment

3.1. Corticosteroids

It has been discovered that corticosteroids are the most dependable and effective medications for treating oral lichen planus. Topically, intralesionally, or systemically, they can be applied.[15,16]

Clobetasol propionate gel (0.05%), 0.1% or 0.05% betamethasone valerate gel, 6.0.05% fluocinonide gel, 27.0.05% clobetasol butyrate ointment or cream, and 0.1% triamcinolone acetonide ointment are among the options.[17]

Using a 1.0-mL 23- or 25-gauge tuberculin syringe, subcutaneously inject 0.2–0.4 mL of a 10 mg/mL solution of triamcinolone acetonide for intralesional injection of corticosteroid for resistant or large lesions. Patients whose OLP lesions are resistant to topical steroid treatment should be spared systemic steroid medication. Many different dosing regimens have been suggested for corticosteroids due to their broad dosage ranges and varying patient reactions. The patient's weight and the severity of the lesions should be taken into consideration when determining the dosage, which should also be adjusted based on how the patient responds to the medication.

To lower the risk of insomnia, prednisone should only be taken once in the morning. It should also be taken with food to prevent nausea and peptic ulcers. To prevent triggering an adrenal crisis, the dosage of systemic corticosteroids recommended for longer than two weeks must be gradually reduced. Short-term systemic steroid therapy has many possible adverse effects. These include hypertension, hyperglycemia, adrenal suppression, muscle weakness, sleeplessness, diarrhoea, central nervous system abnormalities, including psychotic episodes, and retention of sodium and fluids. It is not recommended for people to utilise steroids while nursing a baby. Patients with HIV infection, glaucoma, pregnancy, TB, diabetes mellitus, and hypertension should utilise steroids with caution.[18,19]

3.2. Retinoids

To treat OLP, retinoids have been used both systemically and topically. The synthetic and natural retinol derivatives that show vitamin A action are known as retinoids. It has been observed that retinoid has immunomodulatory and antikeratinizing properties. Topical retinoids are favoured and typically yield better results than systemic retinoids. Systemic retinoids may raise cholesterol and triglyceride levels, and cause partial hair loss, sloughing of the skin, rashes, itching, and dryness of the skin and mucosa. Systemic preparation is not recommended in view of such negative consequences; topical preparation is. One can get 0.05% cream containing retinoin. 0.05% gels are available for isoretinoin.[20,21]

White striae can be reversed using topical retinoids, however the effects might not persist long. Systemic retinoids have been used in cases of severe lichen planus, with differing degrees of success. The potential advantages of retinoids must be weighed against their extremely dangerous side effects, which include cheilitis, elevated liver enzyme and blood triglyceride levels, and teratogenicity.[22–24]

3.3. Tacrolimus

It is not novel to treat oral lichen planus with immunosuppressive medications. It was previously used to prevent organ rejection in kidney transplant patients. It efficiently induces immunosuppression by inhibiting the transcription of interleukin-2 and the transduction of signal to T-lymphocyte. Its effective suppression of calcineurin phosphatase is thought to be the primary mechanism of action. Its systemic administration is similar to that of corticosteroids; however, topical treatments of 0.1% tacrolimus have been shown to be significantly more effective than 0.05% clobetasol in treating oral lichen planus symptoms.

Applying 0.1% tacrolimus ointment four times a day for four to eight weeks was found to have a quicker remission of oral lichen planus symptoms than topical corticosteroid administration. Tacrolimus comes in tablet form for systemic usage as well as ointment form for external use. The market offers Tacroz Forte® in concentrations ranging from 0.1 to 0.03%. Burning and itchy feeling over the area of application during the first two days of treatment are side effects of topical tacrolimus administration. Research on tacrolimus's long-term negative effects is necessary.[25]

Another calcineurin inhibitor is tacrolimus, a stero-approved for the treatment of atopic dermatitis, tacrolimus, a calcineurin inhibitor, is a steroid-free topical immunosuppressive medication. It has a higher rate of percutaneous absorption and is 10–100 times more powerful than cyclosporine. In cases of resistant OLP, it has been effective. Although tacrolimus has a higher mucosal

penetration rate than cyclosporine, its immunosuppressive effects are similar. It blocks calcineurin's phosphatase activity, hence blocking the initial stage of T-cell activation.

The most frequent adverse effect reported a burning sensation; OLP relapses following cessation have also been noted. Tacrolimus may cause cancer, according to a recent warning from the US Food and Drug Administration, which suggests using the medication sparingly rather than long-term.[26]

3.4. PUVA therapy

This non-pharmacologic method makes use of long-wave ultraviolet light (PUVA) and photochemotherapy with 8-methoxypsoralen. Treatment of severe cases of OLP with it has been beneficial. The negative effects of psoralen-induced nausea and dizziness, as well as 24-hour photosensitivity when this medication is given orally, are two of the main drawbacks of PUVA therapy. Dosimetry can also be challenging in the complex geometry of the mouth because PUVA is typically applied to skin across wide,exposed areas.[24]

4. Source of Funding

None.

5. Conflict of Interest

None.

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Author biography

Khumukcham Sophia, Assistant Professor

CH Anupriya, Research Assistant

Mutum Sangeeta Devi, Dental Oncologist

Cite this article: Sophia K, Anupriya CH, Devi MS. Oral lichen planus: An overview. *IP Int J Maxillofac Imaging* 2023;9(4):176-178.