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Management of Oral lichen Planus – A Review

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ABSTRACT *Oral Lichen planus is relatively common mucosal disease with predilection for females in the fourth to fifth decade. It is a T cell mediated autoimmune disease with variable clinical presentations. All the current treatment strategies are aimed at reducing or eliminating the symptoms by treating the inflammatory reaction. This article focuses on the various pharmacological and non pharmacological methods of management of Oral Lichen planus.*

Introduction
Lichen planus is a chronic inflammatory disease that affects the skin and mucous membrane. Oral lichen planus (OLP) is the mucosal counterpart of the lesion. It is of unknown etiology represented by a T cell-mediated immunopathological response to antigenic alterations of keratinocytes in the mucosa. [1]

The disease affects approximately 1-2% of the world population. [2]It has predilection for females and mean age of onset is in the fourth to fifth decade. [3] Oral mucous membrane involvement may occur in addition to cutaneous lesions, or may be the only manifestation of Lichen planus. It is estimated that about 50% of the patients with oral lesions have skin lesions. [4] About 23% of cases have only oral lesions. Cutaneous lesions of Lichen planus are self-limiting, whereas oral lesions are chronic, rarely undergo spontaneous remission and are potentially premalignant and are often a source of morbidity. [2]

Patients with OLP exhibit higher levels of anxiety, greater depression and increased vulnerability to psychic disorders. The course of the disease shows periods of exacerbations followed by remission which correspond to the emotional status. Psychological intervention may be warranted given the fact that the level of anxiety and salivary cortisol of OLP patients are high, supporting the relationship of OLP with stress. [5]

Clinical presentation of OLP
The clinical presentation of OLP varies. In some patients the onset is insidious, and patients are unaware of their oral condition. Some patients report sensitivity of the oral mucosa to hot and spicy food, painful oral mucosa, red or white patches of the oral mucosa, or oral ulcerations. [6] OLP can occur on any mucosal surface, including the lips, but most frequently occurs on the buccal mucosa, the tongue being the next most common site. Andreasen divided Oral Lichen planus into six types: reticular, papular, plaque-like, erosive, atrophic and bullous. The reticular, papular and plaque- like forms are usually painless and appear clinically as white keratotic lesions. The erosive, atrophic and bullous forms are often associated with a burning sensation and in many cases can causes severe pain. [7]

Patients with OLP frequently have concomitant disease in one or more extra oral sites like skin, genital, oesophageal and scalp. Therefore, a thorough evaluation and multidisciplinary approach is required to uncover potential sites of extra oral involvement. [2]

Management
Treatment of OLP depends on symptoms, the extent of oral and extra-oral clinical involvement, medical history and other factors. Patients with reticular and other asymptomatic OLP lesions usually require no active treatment.They should be reviewed annually for any malignant change. Treatment for atrophic and ulcerative lesions involves alleviating symptoms, and potentially decreasing the risk of malignant transformation. [2]

Since the etiology behind OLP is unknown, all the current treatment strategies are aimed at reducing or eliminating the symptoms by treating the inflammatory reaction that has been elicited by some unknown antigen.

Pharmacological management
Many drugs are used including corticosteroids, retinoids, griseofulvin and cyclosporine.

Corticosteroids
Corticosteroids cannot be compared in trials with any other agent in the treatment of OLP. These are effective when applied topically or given intralesionally or systemically. [8]

Topical Corticosteriods
Corticosteroids are applied topically as ointments, pastes, lozenges or elixirs. [9] Midpotency corticosteroids such as triamcinolone, potent fluorinated steroids such as flucinonide and flucinolone acetonide, and superpotent halogenated steroids such as clobetasol are effective. Elixirs such as dexamethasone, triamcinolone, and clobetasol can be used as oral rinses for patients with diffuse oral involvement or for those who find it difficult to apply the medication to various sites.

The topical application of a steroid seems to be safer, but the prolonged use of topical steroids needs careful and close follow-up; the potential for adrenal suppression may be increased by repeated and prolonged application. Up to a two third of patients with OLP develop secondary candidiasis, so some clinicians institute antifungal drugs. [10]

Intralesional Corticosteroids
For intractable erosive OLP lesions, intralesional steroids such as triamcinolone acetonide (10– 20 mg ml) injections can be effective and repeated every 2–4 weeks. However, intralesional corticosteroids have some contraindications, including atrophy of tissue and secondary candidiasis after frequent injections. It may not be possible to deposit sufficient quantities into gingival lesions. [7]

Systemic Corticosteroids
Systemic corticosteroids are used for recalcitrant erosive LP, where topical approaches have failed, or for widespread OLP with concomitant skin, genital, esophageal, or scalp involvement. Daily doses of prednisone in the range of 40–80 mg

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are usually sufficient to achieve a response. [2]Because of the immediate effect of systemic corticosteroids and their inherent toxicity; adverse effects are common even after a course as short as two weeks. The most common adverse effects include gastrointestinal upset, mood alteration, polyuria, insomnia and shakes. Changes in blood pressure and blood glucose concentrations have been reported in few patients. Patients who take systemic steroids for a long time, particularly in high doses, should be monitored regularly. [7]

Retinoids and Vitamin A analogues
The use of retinoids for the treatment of OLP was first reported in 1973 by Gunther and Ebner. The most widely available and employed topical retinoid for the treatment is 0.1% tretinoin gel, a metabolite of vitamin A.Improvement is seen in reticular and plaque like lesions, but erosive forms persist. Local side effects were few or non-existent. Etretinate, which is a vitamin A analogue, is more effective in the treatment of OLP. However the systemic use of vitamin A is limited because of its toxicity and side-effects including skin dryness and hair loss. [9]

Griseofulvin
Griseofulvin has been advocated for the treatment of erosive-ulcerative lesions when steroid treatment is contraindicated or when the lesions are resistant to steroids. The mechanism of action is not known, although it is thought that it may prevent desquamation of the stratum corneum, and so prevent erosions. [7]

Cyclosporin
Cyclosporin is an immunosuppressant and it inhibits the proliferation and function of T lymphocytes. The use of systemic Cyclosporine has been shown to be of benefit in cutaneous lichen planus, resulting in sustained remissions. Its main adverse reaction is renal dysfunction as a result of prolonged use, so patients taking cyclosporin need to be monitored closely. Frances et al advised the use of 100mg of topical Cyclosporine 1 month for management of erosive oral lichen planus. [8] Cyclosporin is expensive so its use in the treatment of oral lichen planus is limited by cost.

Several other systemic immunosuppressive agents have been used in the management of OLP but there has been a little evaluation of their efficacy. They include azathioprine, cyclosporine, dapsone, levamisole, thalidomide and basiliximab. All of these agents require monitoring for laboratory abnormalities and should be administered only by specialists familiar with their adverse effects. [2]

Non Pharmacological management
Surgery
Cryosurgery and carbon dioxide laser ablation have been suggested for the surgical treatment of oral lichen planus. The procedure causes little discomfort and the wounds heal with no contractures or fibrosis. [10] However, excision should not be a primary method of treatment as it is an inflammatory condition that can recur. In addition, surgical management is not suitable for the erosive and atrophic types because the surface epithelium is eroded. Surgical treatment is more applicable to the plaque like lesions, because the affected surface epithelium can be removed easily. [7]

Ultraviolet irradiation
Photochemotherapy with 8-methoxypsoralen and long-wave ultraviolet light (PUVA) has been used successfully in the treatment of cutaneous LP. Methoxypsoralen is given orally, followed by administration of 2 hours of UV radiation intraorally in the affected sites. It was found to be effective in the treatment of severe cases of OLP. But it was found to have many side effects such as nausea, dizziness, eye symptoms, paraesthesia, and headache. Photochemotherapy may be useful for severe forms of erosive OLP that do not respond to conventional treatment. Moreover, one matter of concern is that PUVA therapy has been shown to have oncogenic potential. Further study of PUVA therapy for oral LP is needed. [11]

Photodynamic therapy (PDT)
The treatment of symptomatic OLP, especially the erosive variant was done with PDT by Farzane et al. It has been suggested that PDT may have immunomodulatory effects and may induce apoptosis in the hyperproliferating inflammatory cells which are present in lichen planus. This may reverse the hyperproliferation and inflammation of lichen planus. Further studies are needed to confirm the efficacy of PDT in the treatment of oral lichen planus. [12]

Conclusion
Oral lichen planus is a chronic disease of unknown etiology. Patients should be observed periodically, particularly those with the erosive or atrophic forms and those who also have a history of tobacco misuse, because the lesions may undergo malignant transformation after a long time. Patient education is important as many patients are concerned about the possibility of malignancy, the contagious nature of the disease which may further exacerbate the lesions.

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