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MANAGEMENT OF LICHEN PLANUS-REPORT OF 5 CASES

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Abstract:

Aim: To evaluate the effectiveness of steroids,hydroxychloroquine sulphate,levamisole in 5 patients.

Methods: 5 patients who were clinically and histopathologically diagnosed as lichen planus are treated with topical ,systemic corticosteroids,, hydroxychloroquine sulphate, levamisole respectively and the patients were monitored at periodic intervals for a period of one year

Discussion: Patients treated withTopical steroid showed recurrence after a period of three months whereas other patient had no recurrence and side effects even after a period of one year.

Conclusion: When conventional modalities such as topical and systemic corticosteroids fail to treat oral lichen planus other modalities of treatment such as levamisole,hydoxycholoroquine sulphate can be used by proper monitoring of the patient at periodic intervals to relieve patient symptoms.

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Keywords: Lichen planus, steroids, hydroxychloroquine sulphate, levamisole

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INTRODUCTION

Lichen planus is an immunologically mediated disease especially T cell mediated autoimmune disease. It affects roughly about 1-2% of the population. The oral lesions of the disease was first observed by Louis Frederick Wickham and he gave description of the peculiar striae found on the surface of a lichen planus papule named as Wickham striae in 1895. The characteristic clinical aspects are sufficient to make a correct diagnosis if classic lesions are present. Clinical characteristics of lichen planus is classified by Andreason in 1968 into Reticular, Atrophic, Plaque, Bullous, Erosive. Although it has similar predilection on males and females lichen planus occurs more commonly on females. Clinical history includes phases of remission and exacerbation. Isolated oral lichen planus refers to lichen planus involving only the oral cavity. Patients with reticular lesions are often asymptomatic, but atrophic or erosive OLP is often associated with a burning sensation and pain. A greater malignant potential has been recognized for atrophic, erosive form of OLP and the plaques form biopsy with histopathological diagnosis is necessary to confirm clinical diagnosis and also to exclude dysplasia and malignancy.

The management of oral lichen planus should address the patient symptoms [1,2,3]. It is characterized by relapses and remissions, so its management should aim at resolution of painful symptoms, resolution of oral mucosal lesions, reduction of risk of oral cancer. No treatment modality has been proved curative for OLP; switching on to the alternative agents suggests the inadequacy of any one agent to provide relief to the patient. So this article focuses on the efficacy of topical as well as systemic steroids, levamisole and hydroxychloroquine sulfate in 5 patients.

Case 1:

A 45 year old female patient came with the complaint of burning sensation for past 4 months in gums which aggravated on consuming spicy foods. H/O vesicles in gums for past 2 weeks which ruptures. No history of diabetes, hypertension. Patient is not under any medications. No history of similar lesions elsewhere in the body. Acrlic tray was made and topical clobetasol 0.05% was applied in the tray and left for a period of one hr for 7 days. Patient was reviewed for a period of three months, six months, one year. Burning sensation was reduced immediately within two weeks and lesions healed completely with no recurrence. (Fig 1, 2 &3)

Fig 1:Before treatment of bullous lichen planus

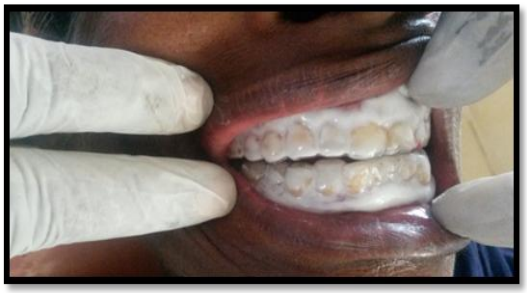


Fig:2 Acrylic tray with clobetasol0.05%

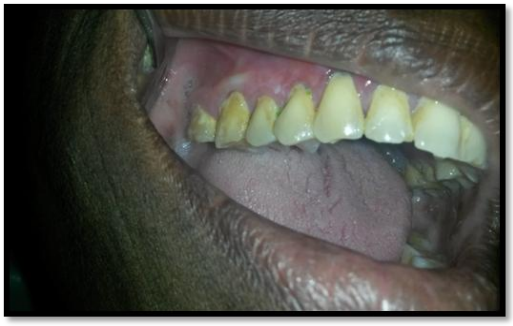
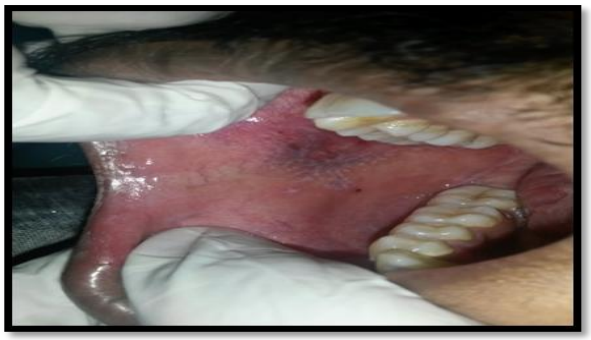


Fig: 3 After treatment of bullous lichen planus

Case:2

A 33 year old male patient came with the complaint of burning sensation on consuming spicy foods for a period of three months. No history of similar lesions elsewhere in the body. He was diagnosed as Reticular lichen planus. He was given levamisole 150mgper week for three consecutive days for a period of three months. His burning sensation reduced and there was no recurrence in the follow up period of one year.(Fig: 4 A, B &5)



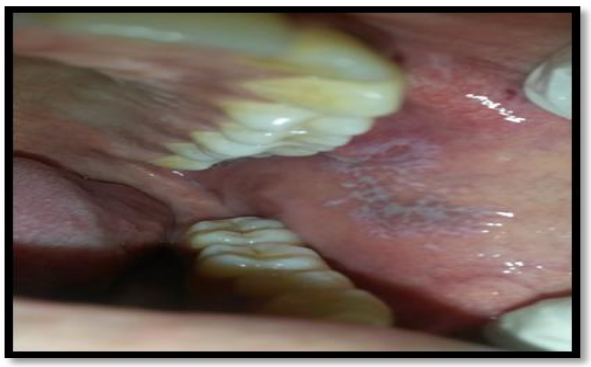
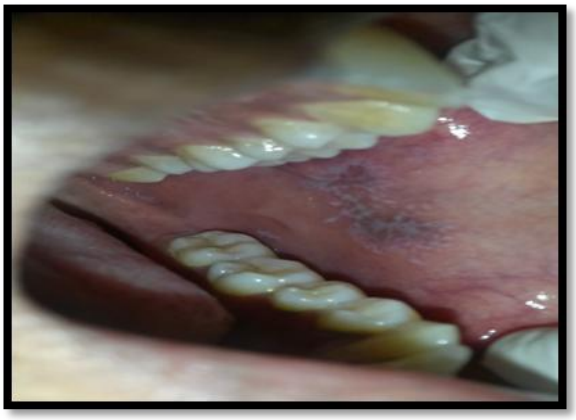


Fig 4 A&B: Before treatment of reticular lichen planus



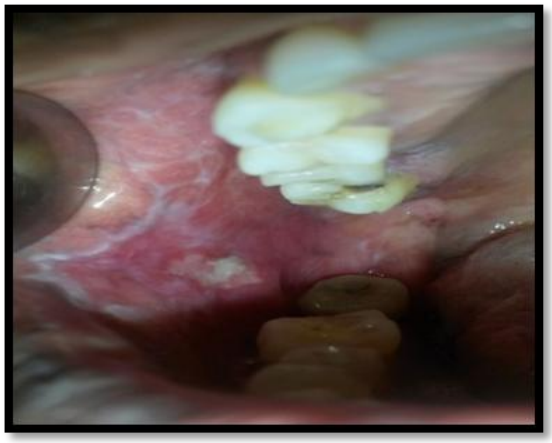
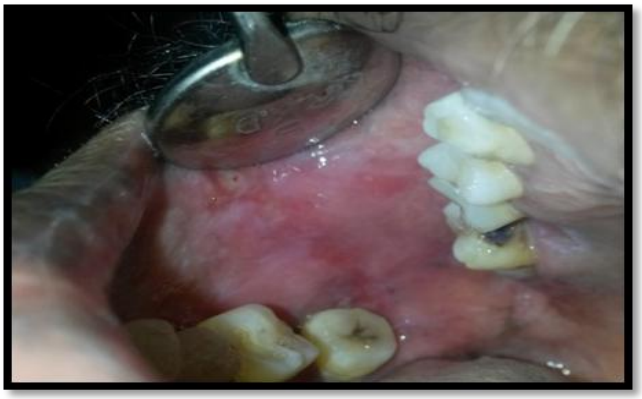


Fig 5: After treatment of reticular Lichen planus

Case 3

A 37 year old male patient came with the complaint of burning sensation in right and left buccal mucosa for a period of 4 months on consuming hot and spicy foods and it was diagnosed as erosive lichen planus. His G6PD levels were assessed before giving Hydroxy chloroquine sulphate. He was given HCQS 200mg for a period of three months.

(Fig 6 A&B, 7 A&B)



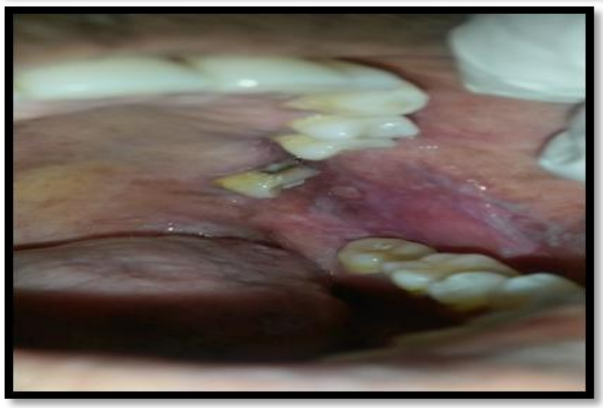


Fig 6A &B: Before treatment of Erosive Lichen planus

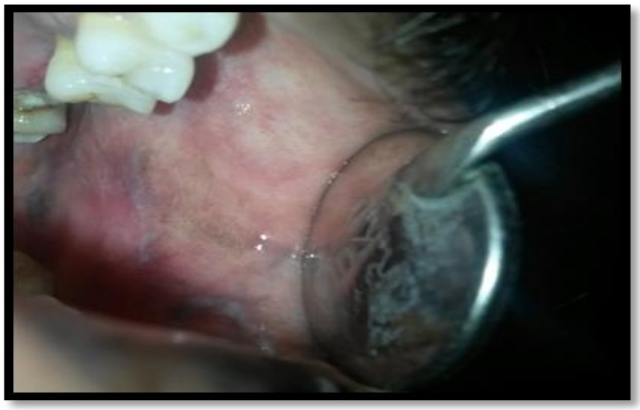


Fig 7A &B:After treatment of Erosive Lichen planus

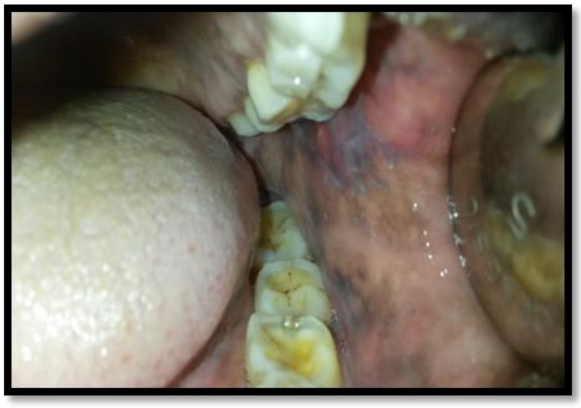
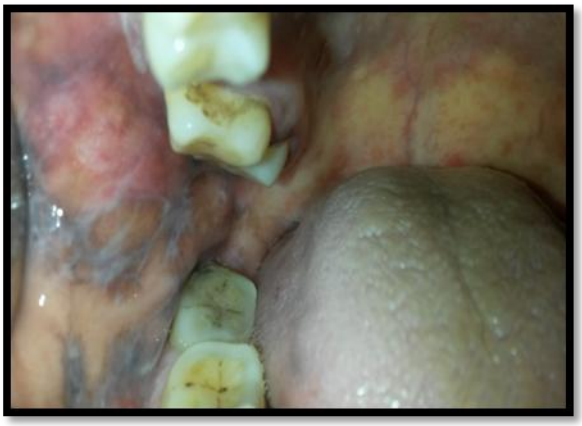
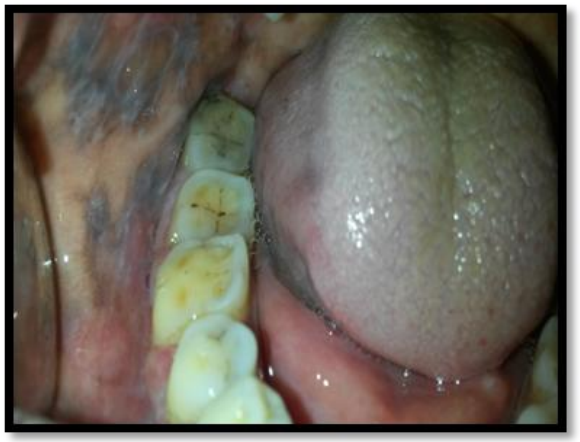


Fig 8 A&B: Before treatment of Erosive Lichen planus

Case:4

A 35 year old female patient came with the complaint of burning sensation in gums and buccal mucosa for a period of three months and it was diagnosed as erosive lichen planus. She was given triamcinolone 0.1% for a period of two weeks.Her burning sensation reduced within two weeks. But she reported with recurrence after a period of 6 months. (Fig 8 A&B, 9 A&B)





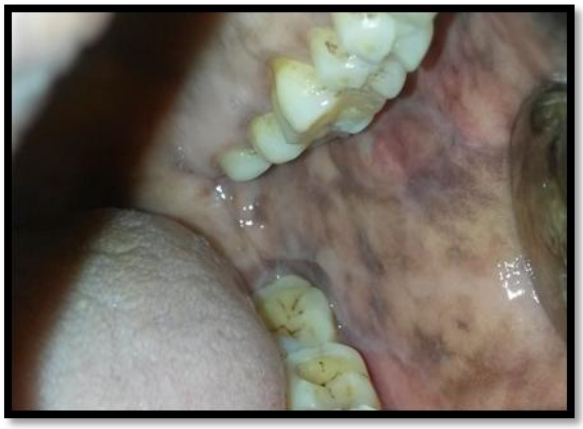


Fig 9 A&B:After treatment of Erosive Lichen planus

Case:5

A 45 year old male patient came with the complaint of burning sensation for a period of 3 months and he was diagnosed as erosive lichen planus .No history of similar lesions elsewhere in the body. He was given prednisolone 4 0mg systemically for a period of 5 days. His burning sensation reduced within a week. (Fig 10 A&B, 11 A&B)

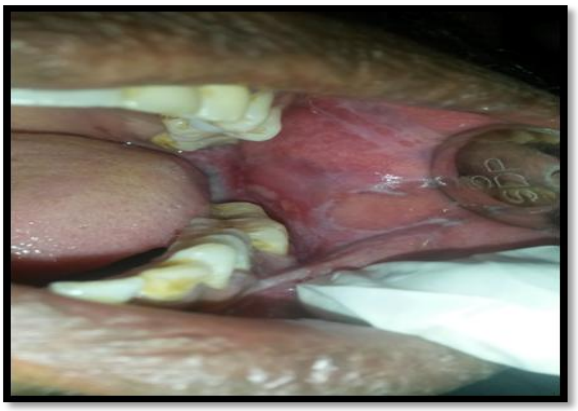
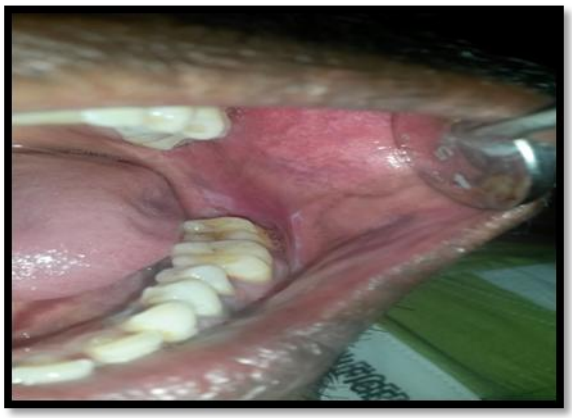


Fig 10 A&B: Before treatment of Erosive Lichen planus



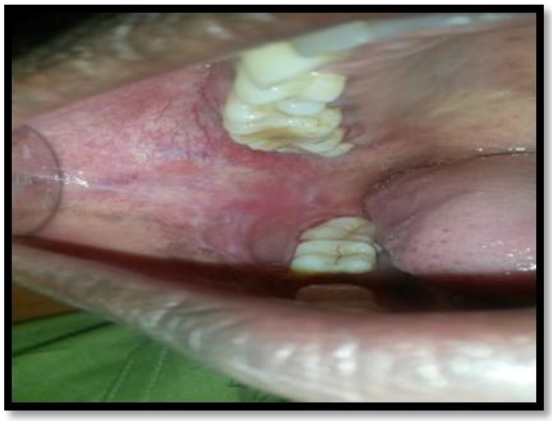


Fig 11 A&B: After treatment of Erosive Lichen planus

Discussion:

Oral lichen planus is a chronic mucosal condition commonly encountered in clinical dental practice. Lichen planus is believed to represent an abnormal immune response in

which epithelial cells are recognized as foreign, secondary to changes in the antigenicity of the cell surface. The different etiological factors considered for LP are genetic background, dental materials, drugs, infectious agent, autoimmunity, immunodeficiency, food allergy, stress, habits, trauma, diabetes, hypertension, malignant neoplasm, and bowel diseases[1-3] . Recent studies indicate an association between Hepatitis C Virus (HCV) and OLP. The main event in the pathogenesis appears to be increased production of cytokines leading to the recruitment of Langerhans cells .Degranulation of mast cells and MMP - 1 activation resuts in T cell accumulation. The chronic nature of OLP lesions is due to damage to the basement membrane which stimulates keratinocyte apoptosis and these keratinocytes are unable to repair the basement membrane [4].

The matrix metalloproteinases (MMP) are principally involved in matrix protein degradation in tissues.Mast cell degranulation releases a range of pro-inflammatory mediators such as TNF-α which is responsible for lymphocyte adhesion, chymase activator of matrix metalloproteinase and also tryptase [5].

Types of lichen planus

The reticular form is the most common type of OLP. It presents as interlacing white keratotic lines (known as Wickham's striae). A variant of reticular OLP is the plaque-like form, which clinically resembles leukoplakia but it has a multifocal distribution border. Erosive OLP is the second most common type. It presents as a mix of erythematous and ulcerated areas surrounded by finely radiating keratotic striae. Two additional presentations are the atrophic and bullous forms, which are considered variants of the erosive type[6,7].

Management of oral lichen planus

Choice of treatment depends on the severity of the lesion and systemic condition of the patient. Treatment is administered mainly to resolve symptoms and discomfort. A variety of agents have been employed for the management of OLP, but corticosteroid remains the mainstay of treatment [8]. Treatment options for lichen planus is mainly symptomatic and various options are topical, systemic steroid, griseofulvin ,Dapsone 100mg once daily for three months, Azathioprine 150 mg once daily, Hydroxychloroquine sulphate, Curcumin, Aloevara, Levamisole, Retinoids, Ignatia a homeopathic medicine, Tacrolimus, Efalizumab, Enoxaparin, Mycophenolate,

PUVA, photodynamic therapy, LASER therapy [9,10].

Various studies showed benefits when topical steroids are used in combination with orabase such as 0.05% flucinonide for a period of two weeks.In another study 0.025% clobetasol proprionate is used which is more potent compared with other topical steroid.To maximise drug delivery system 0.2-0.4ml of triamcinolone acetonide is tried. This also has the advantage of lowering systemic absorption.Silverman et al showed good results with topical steroids than systemic steroids and combination of topical or systemic steroids[3].

Similarly Bullous lichen planus which is treated with clobetasol 0.05% showed better results with no recurrence for a period of one year.But patients of erosive lichen planus treated with topical triamcinolone and systemic prednisolone showed recurrence.

Mechanism of action of Hydroxychloroquine sulphate in lichen planus is by Lysosomotrophic effects .According to Eisen HCQS was used in treatment of oral lichen planus he showed good results with no adverse effects. Similarly patient treated with Hydroxy chlorquine showed good results with no recurrence even after a period of one year. His laboratory parameters remained the same before and after treatment [11]. Levamisole is an immunomodulating agent restores the phagocytic activity of macrophages and neutrophils, thereby it modulates T-cell mediated immunity improving the activity of human interferon. Levamisole has been reported to have many adverse effects such as nausea, vomiting, fever, dizziness, headache, tiredness, skin rash, anaphylaxis and most severely, agranulocytosis [12]. According to Won et al levamisole was found to be effective in the treatment of oral lichen planus,similarly burning sensation was reduced after a period of two weeks of treatment and there was no recurrence and no adverse reactions.

Conclusion

In summary, many but not all patients can be managed with corticosteroids. Topical therapy should be maintained until symptoms and clinical findings improve. Ulcerations that do not respond to topical agents can be treated with systemic corticosteroids. Systemic corticosteroids should be reserved for acute exacerbations characterized by multiple ulcerations or widespread disease. Prolonged use of any of the above modalities without supervision will result in undesirable systemic effects and adverse local effects including candidiasis and atrophy.

To conclude when conventional modalities such as topical and systemic corticosteroids fail to treat oral lichen planus other modalities of treatment such as levamisole, hydoxycholoroquine sulphate can be used by proper monitoring of the patient at periodic intervals to improve patient symptoms.

Declaration of Conflicting Interests:

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

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