Research Article

JRAD Journal of Research and Advancement in Dentistry

J Res Adv Dent 2019;9:3s:102-105.

Effectiveness of Intralesional Betamethasone in Erosive Lichen Planus: A Retrospective Study

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ABSTRACT

Background: Lichen planus (LP) is an inflammatory disorder of the skin and mucous membranes with no known cause. It appears as pruritic, violaceous papules and plaques most commonly seen on oral mucosa,wrists, lower back and ankles. There are different types of lichen planus out of which the reticular type is most common A lattice-like network of white lines called Wickham striae overlies these lesions. Erosive lichen planus are more painful than other types of lichen planus.

Keywords: Degranulation, mucocutaneous, oral lichen planus, pathogenesis, stratified squamous.

INTRODUCTION

Lichen planus (Greek- Leichen "tree moss"; Latin-planus,"flat") is a chronic mucocutaneous inflammatory disorder that affects the skin, mucous membranes, nails and hair[1] . It is a T-cell mediated autoimmune disease which is characterized by small, flat topped, shiny, polygonal violaceous pruritic papules that begin as a pinpoint papule and expand to plaques[2].

"Pruritic, Purple, Polygonal, Planar, Papules, and Plaques" are the traditional 6 "P's" of Lichen planus. The lesions are typically bilateral and relatively symmetric. Oral Lichen Planus (OLP) can be the sole clinical presentation of the disease or accompanied by cutaneous or other mucosal manifestations including the genital area, gastrointestinal tract, and eyes.[3]

The exact incidence and prevalence of lichen planus are unknown but overall prevalence is less than 1%[4].

It can affect all body areas and the sites of predilection being flexor surfaces (flexor wrist), mucous membrane and genitalia. In some cases, the eruptions are very extensive[5]. Oral lichen planus presents frequently in the fourth decade of life and is more common in females than males in the ratio 4:1. It is clinically seen as reticular, papular, plaque like erosive, atrophic or bullous type. Erosive and bullous type of oral lichen planus are more painful and debilitating than non erosive type. Intraorally buccal mucosa, tongue and gingiva are commonly involved. The cause of lichen planus is still a subject of debate but several etiologies have been proposed, both endogenous (genetic) and exogenous (environmental) components such as drugs and infection interact to elicit the disease. Some concluded that the autonomic nervous system from the beginning takes an active part in the pathological process[6]. Some general measures like avoidance of exacerbating drugs, minimizing trauma to skin and

Received: Apr. 17, 2019: **Accepted**: May. 26, 2019
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pISSN 2278-0076
eISSN 2321-9270

mucous membrane lesions, good oral hygiene should be maintained along with keeping stress levels in check and having a balanced lifestyle are key. Mild cases can be treated with rest, lifestyle changes and topical steroids. Therapeutic options are griseofulvin, levamisole, metronidazole, dapsone, hydroxychloroquine, retinoids, methotrexate, azathioprine, cyclophosphamide, PUVA, Interferon alfa-2b, gold, antihistamines etc. The success rate is not satisfactory with these modalities of treatment, so there is a clear need for alternative therapy[7]. Lichen planus is usually a mild disease and corticosteroids are the drug of choice for its treatment[8]. However, when the disease is severe or extensive, corticosteroids in higher doses for a prolonged period may be required to control the disease these are also likely to cause severe side effects[9]. Therefore we evaluated Betamethasone therapy to treat erosive lichen planus.

MATERIAL AND METHODS

This prospective therapeutic trial was done among twenty patients with lichen planus attending our Dental college over a period of 12 months. Patients were diagnosed clinically and confirmed histologically. Patients with both sexes and age between 20-50 years who agreed to come on follow up examination were included and patients having concomitant diabetes, hypertension, fungal disease, peptic ulcer disease and other endocrine diseases were excluded from this study. The study group was treated with intralesional Betamethasone 1.4 mg once a week for 3 months. The clinical response of treatment was assessed by clinical examination and by scoring at each visit in every 4 weeks and was graded as:

Excellent (E) = Scoring 0-2, good (G) = scoring 3-4, Fair (F) = scoring 5-6, Poor (P) = scoring 7-8. The scoring was done on the basis of severity of burning, color of the lesions and the gradation of lesions of lichen planus. The responses in each visit were endorsed into study protocol. All relevant data were collected, edited, organized into tables and analyzed manually.

RESULTS

Out of 20 patients, 10 (50%)were in the age group of 30-40 years, 8(40%)were in 40-50years only 2 (10%) were in 20-30 years of age group (Table I).

Regarding sex distribution, 8 were male and 12 were female with a male to female ratio 2:3 (Table II).

According to site of involvement, 10 (50%) patients had widespread lesions at both side of buccal mucosa, 6 (30%) had on alveolar ridge , 4 (20%) had gingival involvement (Table III), (Fig,2) Regarding duration of lesions, 6 (30%) had 3-6 months of duration, 6 (30%) had >12 months, 4 (20%) had < 3 months and 4 (20%) had 6-12 months of duration (Table IV). Regarding the therapeutic response, maximum response to therapy was observed after 12 weeks of therapy where 60% were good and 40% were fair (Table V).

DISCUSSION

In this prospective therapeutic trial, at the end of treatment it was found that, there was no excellent response but good and fair response in 12 (60%) and 8 (40%) cases respectively (Table V). Our study is comparable to that of R Mittal et al[10] where there were excellent response in 60% of patients and good response in 40% of patients (Fig 3). It is also comparable to the study done by Malhotra et al[11] where good to excellent response was seen in 68% of patients. Current study revealed similar result with somewhat difference. The variation may be due to geographical difference and variation in distribution and number of lesions. The duration of the disease in this study cases was between ½ month to 2 years (Table IV), whereas the duration in the study group of R Mittal was 1 month to 2 years, although the duration of drug therapy was the same. In the present study, there was no side effect to therapy but one woman of 40 years of age developed fungal disease in axilla during therapy and responded to topical antifungal drug. In our study there were no side effects during Betamethasone intralesional therapy.

CONCLUSION

Though the number of patients included in this study is too small to draw any conclusion, Betamethasone intralesional therapy seems to be a better, safer and effective therapeutic modality in lichen planus. Therefore, it needs to be evaluated in a larger number of patients to establish its effectiveness, safety and superiority over the other existing therapeutic modalities.

Table I: Distribution of Erosive lichen planus by age (n = 20).

Age in years	Number of patients (%)
20-30	2(10)
30-40	10(50)
40-50	8(40)

Table II: Distribution of Erosive lichen planus by sex (n=20).

Sex	Number of patients (%)
Male	8(40)
Female	12(60)

Table III: Distribution of lichen planus by the sites of involvement.

Area of distribution	Number of patients (%)
Gingival involvment	4(20)
Alveolar mucosa	6(30)
Both side buccal mucosa	10(50)
Total	20(100)

Table IV: Distribution of lichen planus by duration of lesions.

Duration in months	Number of patients (%)
<3 months	4 (20)
3-6 months	6 (30)
6-12 months	4 (20)
>12 months	6 (30)

Table V: Distribution of lichen planus by therapeutic response.

Response	4 weeks	8 weeks	12 weeks
Excellent	0	0	0
Good	4	8	12
Fair	12	12	8
Poor	4	0	0

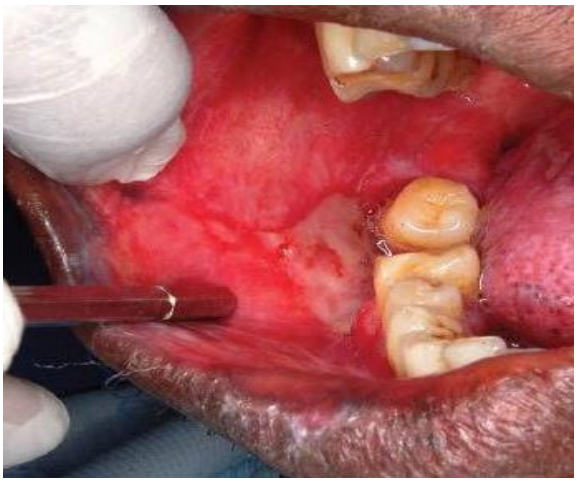

Fig 1: Erosive lichen planus involving buccal mucosa showing erythematous areas.

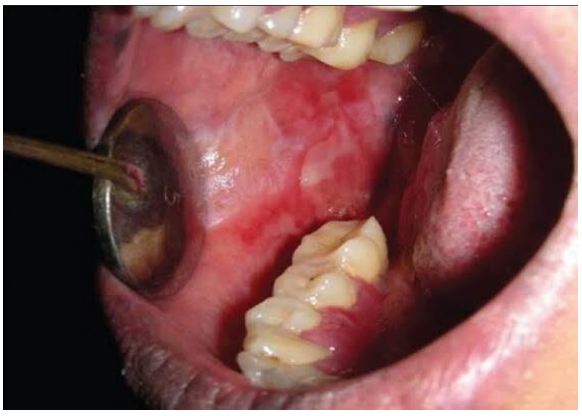

Fig 2: Erosive lichen planus involving buccal mucosa and gingiva

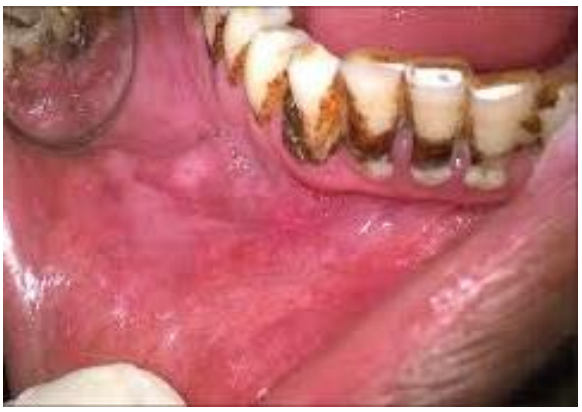

Fig 3: Erosive lichen planus in its healing stage.

CONFLICTS OF INTEREST

The authors declare they have no potential conflict of interests regarding this article.

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