

A Comparative Evaluation Management of Cases of Oral Lichen Planus: A Clinical Study Running Title: Management of Cases of Oral Lichen Planus

Nikita Goyal^{1*} Sapna Raje² Anamika Shivhare³

¹Senior Lecturer, Department of Oral Medicine and Radiology, Sri Aurobindo College of Dentistry & PG Institute, Indore, M.P, India.

²Senior Lecturer, Department of Periodontology, Sri Aurobindo College of Dentistry & PG Institute, Indore, M.P, India.

³Senior Lecturer, Department of Oral Pathology, Sri Aurobindo College of Dentistry & PG Institute, Indore, M.P, India.

ABSTRACT

Background: Oral Lichen Planus is common chronic inflammatory muco-cutaneous disease. The present study was conducted to compare 0.1% Dexamethasone and 0.2% Triamcinolone acetonide mouthwashes for treatment of OLP.

Materials & Methods: This study was conducted on 60 symptomatic patients of OLP. They were divided into 2 groups of 30 each. Group I was given 0.1% Dexamethasone mouthwash. Group II were prescribed 0.2% Triamcinolone acetonide mouthwashes. Pain was assessed using VAS scale as 0 - 10. Size was measured in mm. Each patient was reassessed for all these aspects in the first, second and fifth weeks.

Results: There was more reduction in pain and size of the lesion measured at 1st week, 2nd week and 5th weeks in group I as compared to group II. However, the difference was non- significant ($P > 0.05$).

Conclusion: Authors found that VAS score decreased with both the drugs. There was significant reduction in size of lesion with both 0.1% dexamethasone and 0.2% Triamcinolone acetonide.

Keywords: Oral Lichen Planus, Dexamethasone, Triamcinolone acetonide.

INTRODUCTION

Oral Lichen Planus (OLP) is an inflammatory mucocutaneous autoimmune disease. It involves both oral cavity and skin. It is chronic T-cell-mediated disease. It is derived from the Greek word "*leichen*" means tree moss and Latin word "*planus*" means flat. It is one of the potentially malignant disorders.¹

The incidence of LP is reported to be approximately 1.2% of all new patients seen at health care clinics. The Indian subcontinent has a particularly high incidence of disease. It is seen in 2.6% in Indian population. LP is estimated to affect 0.5% to 2.0% of the general population. Clinically various forms of lichen planus occurs.² The common one is reticular,

papular, plaque-like, bullous and ulcerative lesions. The characteristic feature of the disease is the presence of radiation striae known as Wickham's striae seen in buccal mucosa. It is relatively more common in females as compared to males. The commonest site is buccal mucosa, lateral border of tongue, floor of the mouth and gingiva is least commonly involved. It usually occurs bilaterally.³

The most common symptoms for which patient visit to the dentist is burning sensation to hot and spicy food. In case of erosions or ulcers, since the patients may experience pain or discomfort. OLP is also seen in children, although it is rare. This disease has most often been reported in middle-aged patients with 30-60 years of age. It affects all racial groups.⁴

Received: July. 11, 2018; Accepted: Aug. 23, 2018

*Correspondence Dr. Nikita Goyal.

Department of Oral Medicine and Radiology, Sri Aurobindo College of Dentistry & PG Institute, Indore, M.P, India.

Email: nikitagoyal3008@gmail.com

The management of OLP is to relieve patients' pain and discomfort. Patients' problems vary from burning sensation or pain to difficulty in speech and swallowing. If the lesions do not respond to treatment, there will be a probability of dysplasia. Various treatment modalities have been tried to improve the lesions and reduce the associated pain such as topical dexamethasone, triamcinolone, betametasone etc.⁵The present study was aimed to compare 0.1% Dexamethasone and 0.2% Triamcinolone acetonide mouthwashes for treatment of OLP.

MATERIALS & METHODS

This study was conducted in the department of Oral Medicine & Radiology in year 2014. It included 60 symptomatic patients of OLP. They were informed regarding the study and informed written consent was obtained. Ethical clearance was obtained prior to the study. Diagnosis of OLP was made by the presence of clinical Wickham's striae followed by histology.

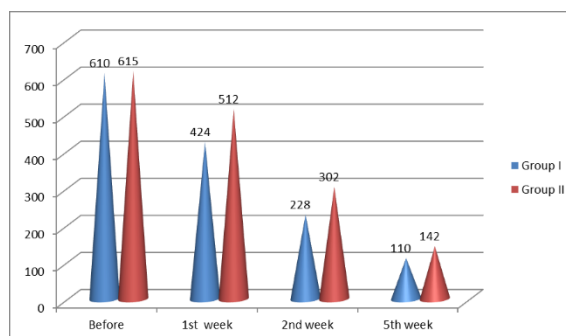
Patient's information such as name, age, gender etc was recorded. They were divided into 2 groups. Group I (30) given 0.1% Dexamethasone mouthwash. Group II (30) were prescribed 0.2% Triamcinolone acetonide mouthwashes. The size of the lesion was evaluated clinically and was measured in mm. Pain was assessed using VAS scale as 0 - 10. Each patient was reassessed for all these aspects in the first, second and fifth weeks. In group I patients, 5cc of Dexamethasone ampoule 8mg/2ml in combination with 15cc normal saline was given for rinsing their mouths. In group II patients, 1cc of Triamcinolone acetonide ampoule 40 mg/ml and combined with 19cc normal saline was given. All were instructed to use it 4 times daily for 5 weeks; after meals and before sleep at night. Results thus obtained were subjected to statistical analysis. P value less than 0.05 was considered significant.

RESULTS

Table 1: Distribution of patients.

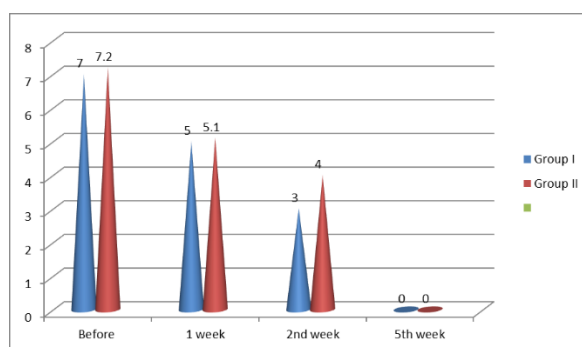
Group I (0.1% Dexamethasone)	Group II (0.2% Triamcinolone acetonide)	P value
30	30	1

Table I shows that in group I, 0.1% Dexamethasone and in group II, 0.2% Triamcinolone acetonide was used in 30 patients each.



Graph 1: Size of lesion before and after treatment.

Graph I shows that before treatment, the size of the lesion was 610 mm², at 1st week was 424 mm², at 2nd week 228 mm² and at 5th week it reduced to 110 mm².² Whereas in group II, before treatment, the size of the lesion was 615 mm² which at 1st week became 512 mm², at 2nd week 302 mm² and at 5th week it reduced to 142 mm².² The difference was non - significant (P > 0.05).



Graph 2: VAS score in both groups.

Graph II shows that VAS score in group I before treatment was 7, at 1st week was 5, at 2nd week was 3 and at 5th week was 0. In group II, VAS score before treatment was 7.2, at 1st week was 5.1, at 2nd week was 4 and at 4th week was 0. There was fastest reduction in VAS score in group I but the difference was non - significant (P > 0.05).

DISCUSSION

Lichen planus is chronic inflammatory disease which manifests in various forms. Although multiple predisposing factors have been documented, the role of T- cell mediated immune response is still the most acceptable etiology. An association has been

observed with HLA-A3, A11, A26, A28, B3, B5, B7, B8, DR1, and DRW9. Materials commonly used in restoration treatments in the oral cavity have been recognized as triggering factors such as silver amalgam, gold, cobalt, palladium, chromium and even non-metals such as epoxy resins (composite) and prolonged use of denture wear.⁶ In present study we compared 0.1% Dexamethasone and 0.2% Triamcinolone acetonide mouthwashes for treatment of OLP.

We included 60 patients equally divided into 2 groups. Group I (0.1% Dexamethasone) included 30 patients and group II (0.2% Triamcinolone acetonide) included 30 patients. We assessed size of the lesion and pain using VAS.

We observed that before treatment, the size of the lesion was 610 mm², at 1st week was 424 mm², at 2nd week 228 mm² and at 5th week it reduced to 110 mm.² Whereas in group II, before treatment, the size of the lesion was 615 mm² which at 1st week became 512 mm², at 2nd week 302 mm² and at 5th week it reduced to 142 mm.² The reduction in size was more in group I than group II, but the difference was non – significant ($P > 0.05$). This is similar to Saxon et al.⁷

It has been postulated that oral lichenoid drug reactions may be triggered by systemic drugs including NSAIDs, beta blockers, sulfonylureas, some angiotensin-converting enzyme (ACE) inhibitors, and some antimalarials, contact allergens including toothpaste flavorings, especially cinnamates.⁸

We observed that there was fastest reduction in VAS score in group I as compared to group II but the difference was non - significant ($P > 0.05$). This is in agreement with Buajeeb et al.⁹ However, Sawaarn et al¹⁰ found greater reduction with 0.1% triamcinolone acetonide as compared to 0.2% dexamethasone as mouth wash. Reticular lichen planus is most commonly seen and it involves buccal mucosa. In case of erosive lichen planus, there is whitish area interspersed with red background. In case of bullous lichen planus, variable sizes bullae are seen. The management may involves usage of topical agents such as triamcinolone acetonide, topical clobetasol etc. Recently, drugs such as immunosuppressive, retinoids and immunomodulators have been found

good results. There is periodic remission as well relapse of the symptoms. Patient is usually instructed to avoid hot and spicy food. The advantage of mouth wash is that each part of the lesion come in contact with the solution.¹¹

The limitation of the study is small sample size. The topical application of corticosteroids may have given different results.

CONCLUSION

Authors found that VAS score decreased with both the drugs. There was significant reduction in size of lesion with both 0.1% dexamethasone and 0.2% Triamcinolone acetonide.

CONFLICT OF INTEREST

No potential conflict of interest relevant to this article was reported.

REFERENCES

1. Mansourian A, Momen-Heravi F, Saheb-Jamee M, Esfehane M, Khalilzadeh O, Momen-Beitollahi J. Comparison of aloe vera mouthwash with triamcinolone acetonide 0.1% on oral lichen planus: a randomized double- blinded clinical trial. *Am J Med Sci*. 2011; 342: 447- 451.
2. Thongprasom K, Chaimusig M, Korkij W, Sererat T, Luangjarmekorn L, Rojwattanasirivej S. A randomized controlled trial to compare topical cyclosporin with triamcinolone acetonide for the treatment of oral lichen planus. *J Oral Pathol Med*. 2007; 36: 142-146.
3. Sharma S, Saimbi CS, Koirala B. Erosive oral lichen planus and its management: a case series. *JNMA J Nepal Med Assoc*. 2008; 47: 86-90.
4. Bakhtiari S, Azimi Hosseini S, Ghaem Maghami A. Review of routine therapeutic management of common oral lesions. *J Dent Sch, Shahid Beheshti Univ Med Scien*. 2008; 25: 348-356.
5. Rad M, Hashemipoor MA, Mojtahedi A, Zarei MR, Chamani G, Kakoei S, Izadi N. Correlation between clinical and histopathologic diagnoses of oral lichen planus based on modified WHO diagnostic criteria. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2009; 107: 796-800.

6. Dalirsani Z, Mehdipour M, Taghavi Zenooz A, Alavi F, Javadzadeh Y. The comparison of combination of triamcinolone acetonide and vitamin A mouthwash with triamcinolone mouthwash alone on oral lichen planus. *J Dent Res Dent Clinic Dent Prospect*. 2010; 4: 21-24.
7. Saxon A, Stevens RH, Ramer SJ, Clements PJ, Yu DT. Comparison of dexamethasone with triamcinolone acetonide in management of OLP. *J Clin Invest*. 1978; 61: 922-930.
8. Ashworth J, Booker J, Breathnach SM. Effects of topical corticosteroid therapy on oral lichen planus. *Br J Dermatol*. 1988; 118: 457-469.
9. Buajeeb W, Poburksa C, Kraivaphan P. Efficacy of 0.1% triamcinolone acetonide in the treatment of oral lichen planus. *Oral Surg Oral Med Oral Pathol Oral Radiol Endod*. 2000; 89: 42-45.
10. Sawaarn N, Shashikanth MC, Sawaarn S, Jirge V, Chaitanya CSKN, Pinakapani R. Triamcinolone acetonide in the management of oral lichen planus: A placebo controlled study. *IJDR*. 2011; 22(5):639-43.
11. McCaughey C, Machan M, Bennett R, Zone JJ, Hull CM. Pimecrolimus 1% cream for oral erosive lichen planus: a 6-week randomized, double-blind, vehicle-controlled study with a 6-week open-label extension to assess efficacy and safety. *JEADV*. 2011; 25:1061-67.