Comparison of 0.1% Dexamethasone and 0.2% Triamcinolone acetonide mouthwashes for treatment of Oral lichen planus- A clinical study

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Abstract

Background: Oral Lichen Planus (OLP) is a relatively chronic T-cell-mediated inflammatory mucocutaneous autoimmune 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 in year 2015 in patients with OLP. They were divided into 2 groups. Group I included 20 patients (males-10, females-10) who were given 0.1% Dexamethasone mouthwash. Group II included 20 patients (males-10, females-10) who were given 0.2% Triamcinolone acetonide mouthwashes. Diagnosis of OLP was made by the presence of clinical wickham’s striae followed by histology. The size of lesion and VAS score was compared in both groups. Results: Group I (0.1% Dexamethasone) included 20 patients (males-10, females-10) and group II (0.2% Triamcinolone acetonide) included 20 patients (males-10, females-10). The difference was non-significant (P > 0.05). Before treatment, the size of the lesion was 628 mm² which at 1st week became 435 mm², at 2nd week 217 mm² and at 4th week it reduced to 109 mm². Whereas in group II, before treatment, the size of the lesion was 630 mm² which at 1st week became 525 mm², at 2nd week 302 mm² and at 4th week it reduced to 132 mm². There was fast reduction in size of lesion in group I but the difference was non–significant (P > 0.05). VAS score in group I before treatment was 6, at 1st week was 4, at 2nd week was 2 and at 4th week was 0. In group II, VAS score before treatment was 6.5, at 1st week was 5, at 2nd week was 3 and at 4th week was 0. There was reduction in size of lesion with both 0.1% dexamethasone and 0.2% Triamcinolone acetonide. The VAS score also decreased with both the drugs. However, 0.1% dexamethasone showed better and faster results.

Conclusion: There was reduction in size of lesion with both 0.1% dexamethasone and 0.2% Triamcinolone acetonide. The VAS score also decreased with both the drugs. However, 0.1% dexamethasone showed better and faster results.

Key words: Oral Lichen Planus, Dexamethasone, Triamcinolone acetonide
Table I shows that VAS score in group I before treatment was 132 mm. After 3 weeks, it reduced to 109 mm. At 6 weeks, it reduced to 89 mm. Whereas in group II, before treatment, the size of the lesion was 628 mm² which at 1st week became 435 mm², at 2nd week 217 mm² and at 4th week it reduced to 109 mm². Whereas in group II, before treatment, the size of the lesion was 630 mm² which at 1st week became 525 mm², at 2nd week 302 mm² and at 4th week it reduced to 132 mm². There was great reduction in size of lesion in group I but the difference was non-significant (P > 0.05). Graph II shows that VAS score in group I before treatment was 6, whereas in group II, at 3 weeks after treatment, VAS score was 302 mm².

**MATERIALS & METHODS**

This study was conducted in the department of Oral Medicine & Radiology in year 2014. It included 40 symptomatic OLP patients. Patients having any systemic disease, pregnancy, allergy to drugs, dysplastic features in histological view and lichenoid lesions were excluded. They were informed regarding the study and informed written consent was obtained. Patient’s information such as name, age, gender etc was recorded. They were divided into 2 groups. Group I included 20 patients (males-10, females-10) who were given 0.1% Dexamethasone mouthwash. Group II included 20 patients (males-10, females-10) who were given 0.2% Triamcinolone acetonide mouthwashes. Diagnosis of OLP was made by the presence of clinical Wickham’s striae followed by histology. Furthermore, in following the arranged protocol among the patients, in case of any disorder, the relevant participant was excluded from the study. At first, a complete description of situation was provided and lesions were assessed by a transparent grid calibrated to 1mm². Pain was evaluated by using VAS scale as 0 - 10. Each patient was reassessed for all these aspects in the first, second and fourth weeks. In group I patients, 5cc of Dexamethasone ampoule 8mg/2ml in combination with 15cc normal saline and in group II patients 1cc of Triamcinolone acetonide ampoule 40 mg/ml and combined with 19cc normal saline was given to patients to rinse their mouths with mouthwashes 4 times daily for 4 weeks; after meals and before sleep at night. Each time they were treated with 5cc of prepared drug for 5 minutes. They had been instructed not to drink or eat for 30 minutes after rinsing. Results thus obtained were subjected to statistical analysis. P value < 0.05 was considered significant.

**RESULTS**

Table I shows that group I (0.1% Dexamethasone) included 20 patients (males-10, females-10) and group II (0.2% Triamcinolone acetonide) included 20 patients (males-10, females-10). The difference was non-significant (P > 0.05). Graph I shows that before treatment, the size of the lesion was 628 mm² which at 1st week became 435 mm², at 2nd week 217 mm² and at 4th week it reduced to 109 mm². Whereas in group II, before treatment, the size of the lesion was 630 mm² which at 1st week became 525 mm², at 2nd week 302 mm² and at 4th week it reduced to 132 mm². There was great reduction in size of lesion in group I but the difference was non-significant (P > 0.05). Graph II shows that VAS score in group I before treatment was 6, whereas in group II, at 3 weeks after treatment, VAS score was 302 mm².
at 1st week was 4, at 2nd week was 2 and at 4th week was 0. In group II, VAS score before treatment was 6.5, at 1st week was 5, at 2nd week was 3 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**

Although the exact etiology of this disease is still unknown, but some factors are associated with it. 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 identified as triggering elements for OLP, including silver amalgam, gold, cobalt, palladium, chromium and even non-metals such as epoxy resins (composite) and prolonged use of denture wear. Oral lichenoid drug reactions may be triggered by systemic drugs including NSAIDs, beta blockers, sulfonyleureas, some angiotensin-converting enzyme (ACE) inhibitors, and some antimalarials, contact allergens including toothpaste flavorings, especially cinnamates.

The present study was conducted to compare 0.1% Dexamethasone and 0.2% Triamcinolone acetonide mouthwashes for treatment of OLP. We prepared 2 groups. Group I (0.1% Dexamethasone) included 20 patients (males-10, females-10) and group II (0.2% Triamcinolone acetonide) included 20 patients (males-10, females-10). In this study we compared size of lesion and VAS score using 0.1% Dexamethasone and 0.2% Triamcinolone acetonide.

We found that there was great reduction in size of lesion in group I as compared to group II but the difference was non-significant (P > 0.05). This is in accordance to Saxon et al. However, Ashworth found greater reduction with 0.1% triamcinolone acetonide as compared to 0.2% dexamethasone as
mouth wash. We also found 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

Drugs used in topical form are corticosteroids, immunosuppressives, retinoids, and immunomodulators. Drugs which are used systemically are thalidomide, metronidazole, griseofulvin, and hydroxychloroquine, some retinoids and corticosteroids.10 Small and accessible erosive lesions located on the gingiva and palate can be treated by the use of an adherent paste in the form of a custom tray, which allows for accurate control over the contact time and ensures that the entire lesional surface is exposed to the drugs.

CONCLUSION
There was significant reduction in size of lesion with both 0.1% dexamethasone and 0.2% Triamcinolone acetonide. The VAS score also decreased with both the drugs. However, 0.1% dexamethasone showed better and faster results.

REFERENCES

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