

USE OF TOPICAL CORTICOSTEROID IN TREATMENT OF ORAL LICHEN PLANUS AND ORAL LICHENOID LESIONS. CLINICAL OUTCOME

¹NASRULLAH KHAN, ²BILAL ARSHAD, ³BEHZAD SALAHUDIN, ⁴HAMZA HASHIM, ⁵SHAHREEN ZAHID, ⁶HAROON ASGHAR GINAI

ABSTRACT

The objective was to check clinical outcomes in patients with oral lichen planus and oral lichenoid lesions (OLP & OLL) treated with topical corticosteroids. A cross sectional study was embraced in Lahore at Avicenna Dental College in Oral and Maxillofacial Surgery from July 2017 to June 2019. Among aggregate of 77 patients, sixteen OLP and sixty-one OLL patients were provided with 0.05% Clobetasole Propionate (CP) in aqueous solution and 0.1% triamcinolone acetonide (TA) in orabase (OB), assessing reactions to treatment and follow-up consistence. The results showed that the lesions were atrophic (52/77; 67.5%), extensive (46/77; 59.1%), creating eating difficulties (45/77; 58.4%) and unconstrained pain (25/77; 32.5%); patients were provided with CP-AS and TA-OB. The mean \pm sd % of subsequent visits done was 43 ± 32 percent.. Symptoms reduction seen in 44% patients. Consistence in recalled visits appeared unsatisfactory in 66.7 percent of patients. Among 38 patients with consistent symptoms, 64.7% prove all out reduction at treatment finishing; among 24 with recurrent symptoms, 73.1 percent of patients had episodes 2-3 times per year and 51.5 percent controlled episodes with <6 applications of TC. Undesired impacts were seen in only few patients. Our treatment demonstrated exceptionally successful and safe.

Keywords. Corticosteroid, Clobetasole Propionate, Triamcinolone Acetonide, Oral Lichen Planus, Oral Lichenoid Lesions.

This article may be cited as: Khan N, Arshad B, Salahudin B, Hashim H, Zahid S, Ginai HA. Use of topical corticosteroid in treatment of oral lichen planus and oral lichenoid lesions. Clinical outcome. Pak Oral Dent J 2019; 39(3):251-54.

INTRODUCTION

Oral lichen planus and Oral Lichenoid Lesions (OLP & OLL) are chronic immune mediated diseases of unknown origin which are most of the time symptomatic and affect 1 to 2 percent of the population^{2,3}. like other autoimmune mediated disease, at present there is no healing treatment so patient undergoes symptomatic treatment to expel symptoms, usually pain and burning symptoms which are either unconstrained and it may be on eating & brushing. Best treatment for Oral lichen planus & Oral Lichenoid lesion is mostly done with topical corticosteroids, despite the fact that their adequacy has not been substantiated in

systemic reviews⁴. There is no common agreement on the use of corticosteroids as indicated by symptoms of the patients. An additional challenge is the recurrent or chronic behaviour of these diseases and requires treatment for quite a while. Undoubtedly, due to the danger of its transformation from Oral lichen planus & Oral Lichenoid lesions to malignant lesions^{5,6}. Numerous authors suggest a long term management for these patients. Although cooperation regarding recall protocol is disputable mostly in these patients⁶. The motivation behind conducting this study was to evaluate the outcomes acquired in patients having Oral lichen planus & Oral Lichenoid lesions treated with Clobetasole propionate and triamcinolone acetonide, thinking about treatment protocols, negative impacts and the consistence of the patients with respect to recalled programmes.

METHODOLOGY

We evaluated the clinical record of patients with oral lichen planus & Oral Lichenoid lesions in Lahore

¹ Dr Nasrullah Khan, Assistant Professor Oral Medicine, Avicenna Dental College Lahore, 58/1, East Block, Sector c, Askari 11, Lahore Cell: 0321-9497413 E-mail: khan_nassar@yahoo.com

^{2,5} Author are from Avicenna Dental College, Lahore

⁶ Dr Haroon Asghar Ginai, Assistant Professor, Azra Naveed Medical & Dental College, Lahore

Received for Publication: Aug 17, 2019
First Revised: Sept 11, 2019
Second Revised: Sept 21, 2019
Approved: Sept 22, 2019

Pakistan at Avicenna Dental College in oral & Maxillofacial Surgery from July 2017 to June 2019. Patients with lesions were biopsied, choosing area that contain tissue from both normal and effected mucosa . The pathologist gave the histopathology of the specimen and the definitive conclusion. Patients were taken as oral lichen planus cases when reticular lesions were present bilaterally and the histopathological evaluation portrayed necrosis of the basal epithelial layer and inflammatory infiltrate in the superficial chorion. Those cases who met clinical as well as histopathological criteria were delegated Oral lichen planus cases ⁷. Lesions that came about not long after medication or close to amalgam alloy filling were excluded. Patients with epithelial dysplasia and those who did not undergo a biopsy were likewise rejected. After applying this qualification criteria, 77 patients were chosen: 16 (20.8 percent) with Oral lichen planus & 61 (79.2 percent) with Oral Lichenoid lesions.

Data gathered for these patients using data form, including their age, gender, contact #, date of biopsy approved diagnosis, area of lesion presentation, size of lesion and categorized into extensive if they were >2 cm larger diameter or <2 cm in various intraoral presentations), moderate if they were 1-2 cm in single intraoral presentation & small if they were < 1 cm and type of lesions and categorized into reticular pattern that showed lace like pattern, which were present in all cases, either alone or related with atrophic/erosive types. They were called atrophic due to the presence of reddish erythematous presentation, and they were labeled erosive in which there was epithelial loss accompanied by atrophic zones, and as plaque presenting as a homogeneously white lesion ¹⁴. Data was additionally collected on the symptoms present, which were continuous pain or burning, or pain while eating or during brushing teeth . The magnitude of severity was evaluated on a scale that ranged 0-10 and delegated intense with score 7 to 10, moderate with score of 4 to 6, or mild with score of 0 to 3. Information were gathered on the given treatment. We provided them 0.05 percent Clobetasole propionate when symptoms were in category of intense and also for moderate category and 0.1 percent triamcinolone acetonide for patients that lied in the category of mild. Aqueous solution was dispensed from pharmacy and given to patients to use for intense and also for moderate lesions or lesions that lied in area with difficult access like uvula or tonsillar pillars and soft palate area and steroids prepared in orabase were applied on small and accessible lesions. Symptoms free patients got no treatment.

All patients were educated that once their appointments for treatment is complete, they would be recalled for subsequent appointment yearly to assess them clinically due to the sustained nature of the disease

and due to its conversion to malignant lesion. They were told to report back to the department promptly on the recognition of any unusual oral lesion. For every patient, the genuine number of line up visits went to was contrasted and the customized visits, grouping follow up consistence as complete when the visits were 100 percent , good when visits were 75 to 99 percent, moderate with visits of 25 to 74 percent, or poor with visits of <25 percent.. All patients were contacted on the number provided by them on data form who missed subsequent sessions, multiple attempts were made to contact them on various days. In these cases alone, patients were gotten some information about their current clinical circumstance and the purposes behind not visiting on subsequent visits. The reaction to corticosteroid treatment was classified as complete for those who have no symptoms and positive for those who reported outbreaks noting down their recurrence and negative.

The objective of treatment with topical steroid in patients with Oral lichen planus & Oral Lichenoid lesions is to eradicate the pain and ulcers, making them recoup their ability for fundamental exercises of day by day life. In our understanding, this result is connected to the fruitful management of erosive lesions. Moreover, treatment can be taken as effective, in our view, when a symptomatic erosive one is changed into a symptom free atrophic lesion ⁶. The presentation of the affected areas can likewise frequently become better..

RESULTS

Our research contain 77 cases having mean \pm sd age of 58 ± 11 yrs , among them 56 (72.7 percent) were female. Most lesions included the buccal mucosa and gingiva; Atrophic lesions were 52 (67.5 percent), and extensive 46 (59.1 percent). The major incessant consolidation of lesions were located in 16 cases on bilateral buccal mucosa (20.7 percent) and bilateral buccal mucosa with the gingiva in 10 (12.9 %). Trouble in eating was accounted for by 45(58.4%), and symptoms were categorized in 37 patients as intense (48.1 percent). The most used management was with Clobetasole propionate in aqueous solution , and those who were symptoms free and required no treatment were 18 (23.3 percent) . The mean % of programmed visits gone to by the patients was 42 ± 33 percent (mean \pm sd), and the follow up compliance was finished in 12 cases (15.5%), good in 4 cases (5.2%), moderate in 9 cases (11.7%), and poor in 52 cases (67.5%) . Table 1 accumulates information on the treatment results.

DISCUSSION

As per these outcomes, treatment of Topical corticosteroids is broadly demonstrated in patients with Oral lichen planus or Oral Lichenoid lesions. Howev-

TABLE 1: OUTCOMES OF PATIENTS

Type A Patients (continuous symptoms or highly frequent outbreaks) (n=51)	30 (58.8%)
Complete remission at the end of 6 months maintenance treatment	7 (13.7%)
Sporadic outbreaks after cessation of maintenance treatment	15 (29.4%)
Patients with complete remission after cessation of maintenance treatment	23 (45.1%)
Patients who did not respond to treatment	6 (11.7%)
Type b patients (less frequent outbreaks) (n=26)	
2-3 outbreaks/year	19 (73.1%)
4-5 outbreaks/year	4 (13.4%)
>5 outbreaks/year	3 (11.5%)
Number of corticosteroids applications to control outbreak (n=33)	
<6 applications per outbreak	17 (51.5%)
6-12 applications per outbreak	7 (21.2%)
>12 applications per outbreak	3 (9.1%)
No treatment applied	6 (18.1%)
Symptoms in outbreaks (n=33)	
Burning	20 (60.6%)
Pain	11 (33.3%)
Other	2 (6.1%)

er, although high strength topical corticosteroids is considered the treatment of choice^{4,6,10,11,12,13, 14,17,20}, its adequacy is randomly located. The control trial has not been illustrated, in light of the fact that non-utilization of treatment is considered ethically ineligible in patients with systemic oral lichen planus. As a second chain¹³, most regularly utilized medication was CP in a static solution.

Most of our patients spread with persistent symptoms or short type (type of patients), while the rest of the patients (restricted type) experience constrained kept discussion on the side effects that were set up to make an extraordinary arrangement. There was a particular convention for each patient kind. TC treatment directions for exploratory injuries are test⁴, and there are no consistent satisfactory principles. We treat a patient who decreases nourishment with a long term of TC (normally CP), achieves the treatment period of 4 months (an application per day on substitution days). According to this pattern, 30 (58.8%) out of 51 tolerant patients were totally evacuated.

Toward the finish of the 6 months treatment period, permits treatment prevention. Clobetasole propionate

in aqueous solution was utilized in patients with wide spread and severe signs and symptoms and got complete healing.

That is the reason it gives off an impression of being the most influential treatment of those reasons, as of now demonstrated by our group¹⁵, the high power and capability of the CP Attributed to the potential outcomes of its high accessibility ability. However, in one kind of patient (29.4%), 15/51, it was unrealistic to prevent recovery treatment toward the finish of 6 months of the treatment time frame. Along these lines, our experience demonstrates that numerous patients need long term treatment to remain free of symptoms. After treatment of 51 sorts of patients, the CP was not replied in a static solution in six and 0.1% completion was changed over into tacrolimus, which included non-respondents CP^{8,18} is viewed as an alternative. BB patients were set day by day with “on interest” multiple times during composing, where more cases (51.5 percent) were settled with more than 6 applications. In our vision, the accomplishment of this methodology depends on the early use of topical corticosteroids promptly recognizing the spread of the disease. The feeling of burning in oral mucosa (20/33; 60.6%) was tried as the most elevated spread, Patients need to continue the need to alarm them.

CONCLUSION

In conclusion, it is fundamental that the patients as a rule have consistent and extremely nonstop and prominent symptoms of OLP/OLL among individuals and the individuals who have been confined to the limited time to decide the best treatment. . As per our clinical experience, A 0.05% solution three times a day for at least the minimum of 6 months requires a cure with the CP. Only a little number of patients fail to respond and respond to an other ammonopedic prescription, and simply couple of people expected to face negative effects, which were minor and could be displaced by decreasing the application recurrence. . It is essential that patient show good compliance regarding followup programmes.

REFERENCES

- 1 Alrashdan MS, Cirillo N, McCullough M. Oral lichen planus: a literature review and update. Archives of dermatological research. 2016 Oct 1;308(8):539-51.
- 2 Alrashdan MS, Cirillo N, McCullough M. Oral lichen planus: a literature review and update. Archives of dermatological research. 2016 Oct 1;308(8):539-51.
- 3 Lauritano D, Arrica M, Lucchese A, Valente M, Pannone G, Lajolo C, Ninivaggi R, Petruzzi M. Oral lichen planus clinical characteristics in Italian patients: a retrospective analysis. Head & face medicine. 2016 Dec;12(1):18.
- 4 Chamani G, Rad M, Zarei MR, Lotfi S, Sadeghi M, Ahmadi Z. Efficacy of tacrolimus and clobetasol in the treatment of oral lichen planus: a systematic review and meta-analysis. International journal of dermatology. 2015 Sep;54(9):996-1004.

- 5 Gopalakrishnan A, Balan A, Kumar NR, Haris PS, Bindu P. Malignant potential of oral lichen planus: an analysis of literature over the past 20 years. *Int J Appl Dent Sci.* 2016;2(2):01-5.
- 6 Schultz C. Topical Clotrimazole/Betamethasone use in Oral Erosive Lichen Planus. *Journal of Pharmacy and Pharmaceutics.* 2017 Aug 30;4(2):142-4.
- 7 Casparis S, Borm JM, Tektas S, Kamarachev J, Locher MC, Damerau G, Grätz KW, Stadlinger B. Oral lichen planus (OLP), oral lichenoid lesions (OLL), oral dysplasia, and oral cancer: retrospective analysis of clinicopathological data from 2002–2011. *Oral and maxillofacial surgery.* 2015 Jun 1;19(2):149-56.
- 8 Kragelund C, Keller MK. The oral microbiome in oral lichen planus during a 1-year randomized clinical trial. *Oral diseases.* 2019 Jan;25(1):327-38.
- 9 Alrashdan MS, Cirillo N, McCullough M. Oral lichen planus: a literature review and update. *Archives of dermatological research.* 2016 Oct 1;308(8):539-51.
- 10 Arduino PG, Karimi D, Tirone F, Sciannone V, Ricceri F, Cabras M, Gambino A, Conrotto D, Salzano S, Carbone M, Broccoletti R. Evidence of earlier thyroid dysfunction in newly diagnosed oral lichen planus patients: a hint for endocrinologists. *Endocrine connections.* 2017 Nov 1;6(8):726-30.
- 11 García-Pola MJ, Gonzalez-Alvarez L, Garcia-Martin JM. Treatment of oral lichen planus. Systematic review and therapeutic guide. *Medicina Clínica (English Edition).* 2017 Oct 23;149(8):351-62.
- 12 Patil S, Khandelwal S, Sinha N, Kaswan S, Rahman F, Tipu S. Treatment modalities of oral lichen planus: an update. *Journal of Oral Diagnosis.* 2016;1(1):1-.
- 13 Piñas L, García-García A, Pérez-Sayáns M, Suárez-Fernández R, Alkhraisat MH, Anitua E. The use of topical corticosteroids in the treatment of oral lichen planus in Spain: A national survey. *Medicina oral, patología oral y cirugía bucal.* 2017 May;22(3):e264.
- 14 Siponen M. Oral lichen planus—etiopathogenesis and management. *Acta Univ. Oul. D.* 2017;1403.
- 15 Belal MH. Management of symptomatic erosive-ulcerative lesions of oral lichen planus in an adult Egyptian population using Selenium-ACE combined with topical corticosteroids plus antifungal agent. *Contemporary clinical dentistry.* 2015 Oct;6(4):454.
- 16 Sun SL, Liu JJ, Zhong B, Wang JK, Jin X, Xu H, Yin FY, Liu TN, Chen QM, Zeng X. Topical calcineurin inhibitors in the treatment of oral lichen planus: a systematic review and meta-analysis. *British Journal of Dermatology.* 2019 Mar 22.
- 17 Gupta S, Jawanda MK. Oral lichen planus: An update on etiology, pathogenesis, clinical presentation, diagnosis and management. *Indian journal of dermatology.* 2015 May;60(3):222.
- 18 Saad I, Salem S. Evaluation of Serum Desmoglein 1 and Desmoglein 3 in Oral Erosive Lichen Planus before and after Topical Application of Tacrolimus. *The journal of contemporary dental practice.* 2018 Oct 1;19(10):1204-13.
- 19 Qureshi SW, Bhatti UD, Shamsi AA. Lichen Planus: A Retrospective Study of 217 Patients. *Pakistan Oral & Dental Journal.* 2017 Sep 30;37(3):422-5.
- 20 Bakhtiar R, Noor SM, Paracha MM. Effectiveness of Oral Methotrexate Therapy versus Systemic Corticosteroid Therapy in Treatment of Generalised Lichen Planus. *Journal of the College of Physicians and Surgeons--Pakistan: JCPSP.* 2018 Jul;28(7):505-8.

CONTRIBUTIONS BY AUTHORS

- | | |
|-------------------------------|---|
| 1 Nasrullah Khan: | Study conception and design, critical revision. |
| 2 Bilal Arshad: | Proof reading and acquisition of data. |
| 3 Behzad Salahudin: | Literature search and review. |
| 4 Hamza Hashim: | Data collection and data analysis. |
| 5 Shahreen Zahid: | Drafting of article and tabulation of results. |
| 6 Haroon Asghar Ginai: | Reviewing of manuscript . |

CORRIGENDUM

Article titled Etiology of traumatic injuries to the teeth was published in Vol 39 No. 1 (2019):
January-March 2019 issue of *PODJ* on page 85. Details about authors may be read as:

Alia Ahmed, BDS, FCPS, Professor, Operative Dentistry, IIDC, Riphah International University,
Islamabad

Kiran Imtiaz Khan, BDS, IIDC, Riphah International University, Islamabad

Mansoor Khan, BDS, FCPS, Assistant Professor, Operative Dentistry,
Foundation University College of Dentistry, Foundation University, Islamabad