

Original Research

Curcumin alone and curcumin with prednisone in management of Oral Lichen Planus Patients

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ABSTRACT:

Background: A chronic inflammatory mucocutaneous illness that affects the skin, nails, and oral cavity is called oral lichen planus. In this study, curcumin monotherapy and curcumin in combination with prednisone were tested for the treatment of oral lichen planus patient. **Materials & Methods:** The present study was conducted on 68 patients diagnosed clinically and histologically as oral lichen planus which were divided randomly into 2 groups of 34 each. In group I patients, Curenext oral gel was prescribed for topical application for 15 minutes, three times a day. In group II patients, a paste of crushed tablet of prednisone and curenext oral gel was prescribed for 15 minutes, three times a day. All patients were recalled after 10 days for 1st follow up and 20 days later for 2nd follow up and reticulation, erosion and pain on VAS were recorded. **Results:** The mean reticulation score at baseline in group I was 1.82, in group II was 1.80, on 10th day in group I was 1.60 and in group II was 1.14 and on 20th day in group I was 0.86 and in group II was 1.42. The difference was significant ($P < 0.05$). The mean erosion score at baseline in group I was 2.32, in group II was 2.30, on 10th day in group I was 1.95 and in group II was 1.45 and on 20th day in group I was 0.82 and in group II was 0.10. The difference was significant ($P < 0.05$). The mean VAS score at baseline in group I was 4.10, in group II was 3.94, on 10th day in group I was 3.24 and in group II was 1.92 and on 20th day in group I was 1.26 and in group II was 0.06. The difference was significant ($P < 0.05$). **Conclusion:** Authors found that combination of curcumin and prednisone proved to be effective as compared to curcumin alone in patients of oral lichen planus.

Key words: Curcumin, Oral lichen planus, Prednisone

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INTRODUCTION

The oral cavity is affected by Oral Lichen Planus (OLP), a chronic inflammatory mucocutaneous disease that has been linked to a strong burning sensation that lowers the patient's quality of life.¹ The condition deteriorates the patient's quality of life (QOL) by producing problems with taste, chewing, and sleep patterns. OLP is an autoimmune mucosal condition caused by T cells. It might affect the mucosa as well as the skin.² It frequently happens in the mouth. Although there are six distinct types of LP, the most prevalent ones are erosive, reticular, atrophic, and have white striae. Typical oral symptoms include erosions, papules, reticulating white striae, and erythema accompanied by variable degrees of mouth discomfort. The range of signs and symptoms is modest to nonexistent discomfort.³ Corticosteroids continue to be the preferred and most effective treatment at this time.

Numerous treatment modalities exist, with steroids being the most widely used. Topical treatment is more preferred owing to the recurrent nature of the illness.⁴ Recalcitrant instances that are full-blown cases are treated with systemic steroids. Because they have potent anti-inflammatory effects, steroids continue to be a widely used therapeutic option. Because the disease is resistant and persistent, these medications must be used for an extended period of time, which has negative side effects.⁵ It has been discovered that curcumin, the main element in turmeric, possesses anti-inflammatory, antioxidant, and anticancer properties. In cases of potentially cancerous illnesses of the mouth, it has chemopreventive effects. Since oral lichen planus (OLP) is classified as an autoimmune chronic inflammatory disease, people with OLP benefit from curcumin's anti-inflammatory properties.⁶ The present study compared curcumin alone and curcumin with prednisone in management of cases of oral lichen planus.

MATERIALS & METHODS

The present study was conducted in the department of Oral Medicine & Radiology. It comprised of 68 patients diagnosed clinically and histologically as oral lichen planus. The study was approved from ethical committee. The consent of all recruited patients was obtained.

RESULTS

Data on name, age, gender, and so forth were noted. Patients were divided randomly into 2 groups of 34 each. Curenext oral gel was prescribed for topical application three times a day for 15 minutes each patient in group I. For three periods of fifteen minutes each day, group II patients were provided a paste made from crushed prednisone tablets and curenext oral gel. All patients were recalled after 10 days for 1st follow up and 20 days later for 2nd follow up. On the VAS, parameters like pain, erosion, and reticulation were noted. The score for reticulation was: 1. 1. = striae > 1 cm; 2. = striae 2-3 cm; 3.=>3 cm. The erosion score was: Lesion more than 1 centimeter (a.1); lesion 2-3 centimeters (b.2). The whole buccal mucosa (c. 3). A scorching or painful feeling was measured using: A = no symptoms, B = slight discomfort, C = mild burning when eating spicy food, D = moderate burning when eating spicy food, E = severe burning when eating spicy food, and F = excruciating pain. The outcomes that were attained in both groups were compared. A P value of less than 0.05 was deemed noteworthy.

Table I Distribution of patients

Groups	Group I	Group II
Agent	Curenext oral gel	Tablet prednisone and curenext oral gel
Number	34	34

Table I shows distribution of patients based on drugs used. Each group had 34 patients.

Table II Assessment of reticulation score

Follow up	Group I	Group II	P value
Baseline	1.82	1.80	0.94
10 th day	1.60	1.14	0.07
20 th day	0.86	1.42	0.01

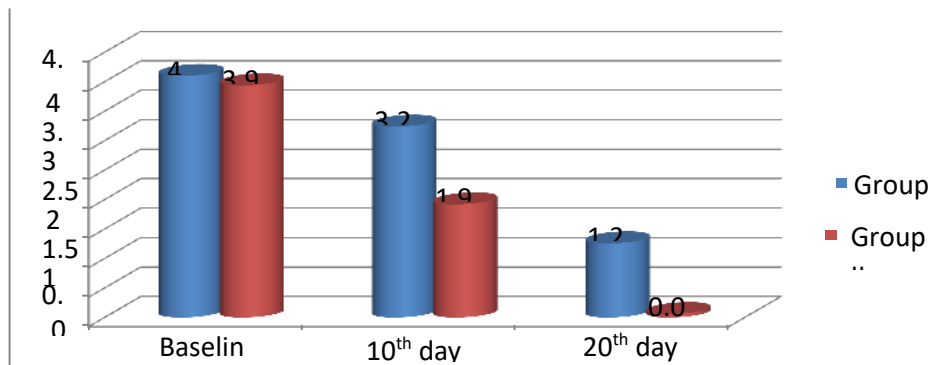
According to Table II, the mean reticulation score for Group I was 1.82 at baseline, Group II was 1.80, Group I was 1.60 and Group II was 1.14 on Day 10, and Group I was 0.86 and Group II was 1.42 on Day 20. There was a substantial difference ($P < 0.05$).

Table III Assessment of erosion score

Follow up	Group I	Group II	P value
Baseline	2.32	2.30	0.96
10 th day	1.95	1.45	0.09
20 th day	0.82	0.10	0.001

The mean reticulation score at baseline for groups I and II was 1.82 and 1.80, respectively, on day 10, group I and group II had 1.60 and 1.14, respectively, and on day 20, group I and group II had 0.86 and 1.42, respectively, according to Table II. Significant differences were observed ($P < 0.05$).

Graph I Assessment of pain (VAS)



According to Graph I, the mean VAS score for Group I was 4.10 at baseline, Group II was 3.94, Group I was 3.24 and Group II was 1.92 on Day 10, Group I was 1.26 and Group II was 0.06 on Day 20. There was a substantial difference ($P < 0.05$)

DISCUSSION

Lichen planus (LP) is a long-term mucocutaneous condition affecting the stratified squamous epithelium of the scalp, nails, skin, and mucous membranes in the genitalia and mouth. The mucosal equivalent of cutaneous LP is called oral lichen planus (OLP). The Latin term “planus” means flat, and the Greek word “lichen” meaning tree moss are the sources of this name.⁷

Five characteristics of LP’s cutaneous lesions are purple, polygonal, pruritic papules, and plaque. LP usually presents with a cutaneous and mucosal eruption at first, although it can also occasionally present with oral or nail findings alone. LP often starts as distinct, flat-topped papules that range in dimension from 3 to 15 mm. These papules may eventually combine to form bigger plaques. They appear red in the early stages of the illness, but they rapidly develop a violaceous or reddish-purple hue.⁹ The papule’s surface is covered in distinctive Wickham striae, which are extremely fine, grayish white lines that have a little umbilicate in the center. Although the lesions can form anywhere on the skin’s surface, they are most frequently found on the trunk, inside surfaces of the thighs and knees, and flexor surfaces of the limbs. They can also appear on trauma lines, which is indicative of the Köbner phenomenon.¹⁰ In this study, the management of instances with oral lichen planus was examined between curcumin alone and curcumin in combination with prednisolone. 68 OLP patients were enrolled in this study. Two groups of 34 patients each were randomly assigned to the groups. Curenex oral gel was provided for topical application three times a day for 15 minutes each patient in group I. For three periods of fifteen minutes each day, group II patients were provided a paste made from crushed prednisone tablets and curenex oral gel. We discovered that the mean reticulation score in groups I and II at baseline was 1.82, 1.80, 1.60, and 1.14 on days 10 and 20, respectively, and 1.86 in groups I and II on days 20 and 21.¹¹ In this study, 60 patients with oral lichen planus had the clinical effectiveness of a novel topical combination of prednisone and curcumin assessed. When compared to the first mode of therapy, the novel mixture significantly reduced the erosion, discomfort, and reticulation. We saw that, at baseline, group I’s mean erosion score was 2.32, group II’s was 2.30, group I’s on day 10 was 1.95, group II’s was 1.45, and group I’s on day 20 was 0.82, group II’s was 0.10. At baseline, group I’s mean VAS score was 4.10, group II’s was 3.94; on day 10, group I’s was 3.24 and group II’s was 1.92; on day 20, group I’s was 1.26 and group II’s was 0.06. Thomas et al¹² Three groups of 75 OLP patients were studied: Group 1 received 0.1% triamcinolone acetonide oral paste three times a day in decreasing doses; Group 2 received curcumin oral gel three times a day; and Group 3 received curcumin oral gel six times a day. The Modified Oral Mucositis Index (MOMI) and the numerical rating score were used to analyze the patients for the sign (erythema and ulceration) and symptom (burning) throughout a three-month period on a bimonthly basis. Using a paired t-test to compare the three groups, it was shown that there was a statistically significant decrease in all three groups’ erythema and ulceration ($p < 0.001$), as well as burning sensation ($p < 0.001$). When the three groups were examined, Group 1 displayed the greatest decrease in erythema and ulceration (67%) as well as burning sensation (77%) among the participants. It was discovered that higher frequency was more advantageous for the curcuminoid group. Although curcumin oral gel can enhance OLP patients’ clinical outcomes, it cannot be a mainstay medication. Alternatively, it can be administered as a maintenance medication following the patient’s first course of corticosteroid treatment. The shortcoming of this study is small sample size. Moreover, only 2 drugs were compared.

CONCLUSION

Authors found that combination of curcumin and prednisone proved to be effective as compared to curcumin alone in patients of oral lichen planus.

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