

Original Article

Effects of Griseofulvin in the Treatment of Lichen Planus -A Study in BSMMU

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Abstract

Lichen Planus (LP) is an inflammatory disorder of skin, mucous membranes, nails and hair. There are various modalities of treatment but none is curative. This prospective therapeutic trial was done among patients with lichen planus at the outpatient department of Dermatology & Venereology, Bangabandhu Sheikh Mujib Medical University (BSMMU), Dhaka between November 2001 and April 2002. Total 20 patients were taken of them 12 were male and 8 were female with male to female ratio 3:2. Age of the patients was between 10 to 50 years. Patients were diagnosed clinically & confirmed histologically. They were treated with griseofulvin 500 mg daily for 6 months. Out of 20 patients, 8 had only oral lesions, of them 2 (25%) showed complete response, 3(37.5%) showed moderate improvement and 4 (37.5%) showed no response. Other 12 patients had lichen planus involving skin without oral mucosa, of them 4 (33.3%) showed moderate improvement, 4 (33.3%) showed no response and 4 (33.3%) patients worsens with treatment. So, success in patients with cutaneous lichen planus is less likely; however, griseofulvin may afford relief in selected patients with oral lesion. This study indicates that further prospective placebo controlled studies are needed to clarify the efficacy of griseofulvin in lichen planus.

Key words: Lichen planus, Griseofulvin.

Introduction :

Lichen planus (LP) is a common inflammatory disorder that affects the skin, mucous membranes, nails & hair. The exact incidence & prevalence of Lichen planus are unknown but overall prevalence is less than 1%¹. It can affect all body areas and the sites of predilection are flexor surfaces, mucous membrane & genitalia. In some cases, the eruption is very extensive². It occurs throughout the world in all races. It may be familial in 1% to 2% of cases. It is uncommon in children and represents only 4% of cases of Lichen planus & their lesions are often atypical³. The cause of Lichen planus

is still a subject of debate but several etiologies have been proposed. Both endogenous (genetic) & exogenous (environmental) components such as drugs & infection interact to elicit the disease. Lichen planus is a benign disease with spontaneous remission & exacerbation. Various modalities of treatment are available but none is curative. Mild cases can be treated with rest, topical steroids with or without wet dressing or occlusion. Widespread lesions respond well to systemic corticosteroids but tend to relapse as the dose is reduced^{3,4}. Other therapeutics are griseofulvin, levamisole, metronidazole, dapsone, hydroxychloroquine, cyclophosphamide, cyclosporine, PUVA etc. The success rate is not satisfactory with these modalities of treatment, so there is a clear need for alternative therapy⁵⁻⁸. This study was done to evaluate the efficacy of griseofulvin in the treatment of lichen planus.

Materials and Methods:

This prospective therapeutic trial was done among twenty patients with lichen planus at the outpatient department of Dermatology & Venereology, BSMMU, Dhaka between November 2001 and April 2002. Patients were diagnosed clinically & confirmed histologically. Patients with both sexes and age between 10-50 years who agreed to come on follow up examination were included and patient having

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hypersensitivity to griseofulvin, pregnant & lactating mothers were excluded from this study. All patients were treated with griseofulvin 500 mg/day for 6 months. Response of treatment was assessed by clinical examination at each subsequent visit (every two weeks). All relevant data were collected, edited, organized into tables and analyzed manually.

Observation and results:

Out of 20 patients, 10 (50%) were in the age group of 21-30 years and only 2 (10%) were in 10-20 years of age group (Table I).

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

Age in years	No. of patients	Percentage
10 -20	2	10%
21 -30	10	50%
31 -40	4	20%
41 -50	4	20%
Total	20	100%

Regarding sex distribution, 12 (60%) out of 20 patients were male and rests were female with a male to female ratio of 3:2.

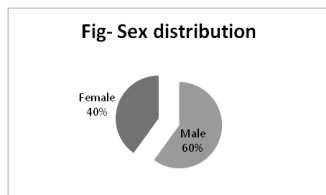


Figure I: Distribution of lichen planus by sex (n=20).

According to site of involvement, 12 (60%) patients had only skin lesion, 8 (40%) had oral mucosal involvement and none had nail involvement (Table II).

Table II: Distribution of lichen planus by the site of the lesions (n=20).

Site of involvement	No. of patients	Percentage
Skin	12	60
Oral mucosa	8	40
Nail	0	0
Total	20	100

Regarding therapeutic response, out of 8 patients with oral lichen planus (25%) showed complete response, 3 (37.5%) showed moderate improvement and rest 3 (37.5%) patients showed no response (Table III). But among 12 patients with cutaneous lichen planus, none showed complete response, 4 (33.3%) showed moderate improvement, 4 (33.3%) had no response and 4 (33.3%) patients rather worsened with treatment (Table IV).

Table III: Distribution of oral lichen planus by the therapeutic response (n=8).

Therapeutic response	No. of patients	Percentage
Complete response	2	25
Moderate improvement	3	37.5
No response	3	37.5
Total	8	100

Table IV: Distribution of cutaneous lichen planus by the therapeutic response (n=12).

Therapeutic response	No. of patients	Percentage
Complete response	0	0
Moderate improvement	4	33.3
No response	4	33.3
Worsen	4	33.3
Total	8	100

Discussion:

In this prospective therapeutic trial, at the end of treatment it was found that, among patients with oral lichen planus, there was complete response in 25%, moderate improvement in 37.5%, and no response in 37.5% of cases. Thus total 62.5% of patients showed clinical response. Ishrat Bhuiyan et al showed clinical response in 66.66% (complete response in 33.3% and moderate response in another 33.3%) cases with oral involvement⁹. So our study is comparable to the study done by Ishrat Bhuiyan. But in the study done by Bagan et al no case was improved and on the contrary, in four patients (two with erosive and two with reticular forms) the condition worsened⁵. Mass MC found 54% complete improvement in oral lesion¹⁰. In a study by Bernerd Cribier et al 3 cases out of 7 showed dramatic response with griseofulvin in oral LP¹¹. Naylor failed to show any benefit in 4 patients with erosive oral LP treated with griseofulvin¹².

In this study, moderate clinical response of cutaneous LP was seen in 33.33% cases, no response was found in same number of patients but no cases showed complete response. Ishrat Bhuiyan et al showed moderate improvement in 37.5%⁹. Thus our study is comparable to the study done by Ishrat Bhuiyan. Cribier and Chosidow first reported 12% improvement with 1gm/day griseofulvin administered for 1 to 10 months and in their second study 86% of the patients had complete disappearance of the lesions after 3 months¹¹. Sehgal et al showed encouraging results using griseofulvin in cutaneous lichen planus¹³.

Conclusion:

Griseofulvin gives complete improvement in 25% cases and moderate improvement in 37.5% cases in oral lichen planus and it gives moderate improvement in 33.3% cases in cutaneous lichen planus after treatment of 6 months. This study was done on a small scale and without any control group, so conclusive comments could not be passed. Further study is needed with large sample size and control population for finding the actual therapeutic effects of griseofulvin on lichen planus.

References

1. Pittelkow MR, Daoud MS. Lichen planus. In: Wolff K, Goldsmith LA, Katz SI, editors. *Fitzpatrick's Dermatology in General Medicine*. 7th ed. New York: McGraw-Hill; 2008. p. 244-55.
2. Lear IT, English JS. Erosive and generalized lichen planus responsive to treatment. *Clin Exp Dermatol*. 1996; 21(1):56-7.
3. Odom RB, James WD, Trimothy GB, editors. *Anderw's Diseases of the Skin*. 10th ed. Philadelphia: WB Saunders; 2000. p. 217-30.
4. Oliver GF, Winkelman RK. Treatment of lichen planus. *Drugs* 1993; 45:56-65.
5. Bagan JV, Silvestre FJ, Mestre S, Gisbert C, Bermejo A, Agramant J. Treatment of lichen planus with griseofulvin report of seven cases. *Oral Surg Oral Med Oral Pathol*. 1985; 60:608-10.
6. Berger RS, Hayues TJ. Treatment of lichen planus. *J Am Acad Dermatol*. 1989; 21:438-42.
7. Royd AS, Neldner KH. Lichen planus. *J Am Acad Dermatol*. 1991; 25:593-619.
8. De JEM, Van DLPC. Co-existence of palmoplantar lichen planus and lupus erythematosus with response to treatment using acitretin. *BJ Dermatol*. 1996; 134(3):538-41.
9. Bhuiyan I, Wahab MA, Ali A, Sultana A, Siddique RU, Hawlader AR. Comparative efficacy of hydroxychloroquine and griseofulvin in the treatment of lichen planus. *Journal of Pakistan Association of Dermatologists* 2010; 20:79-83.
10. Massa MC, Rogers RS. Griseofulvin therapy of lichen planus. *Acta Derm Venereol*. 1981; 61:547-50.
11. Cribier B, Chosidow CFO. Treatment of lichen planus. *Arch Dermatol*. 1998; 134:1521-30.
12. Naylor GD. Treating erosive lichen planus with griseofulvin. *Quintessence Int*. 1999; 21:943-7.
13. Sehgal VN, Abraham GJS, Malik GB. Griseofulvin therapy in lichen planus. *Br J Dermatol*. 1972; 87:383-5.