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Original Article

Efficacy of Betamethasone Oral Mini-Pulse Therapy in the Treatment of Lichen Planus

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Abstract:

Lichen planus (LP) is a common inflammatory disorder that affects the skin, mucous membranes, nails and hair. There are various modalities of treatment but none is curative. Betamethasone oral mini-pulse (OMP) therapy has been used effectively and safely in vitiligo, alopecia areata and lichen planus. We sought to evaluate the efficacy and safety of Betamethasone OMP in patients with lichen planus. This prospective study was carried out among patients with lichen planus fulfilling the inclusion criteria, attending the skin and VD outpatient department of Dhaka Medical College Hospital, Dhaka Bangladesh over a period of 6 months from January 2005 to June 2005. A total of 20 patients with lichen planus diagnosed clinically and confirmed by histopathological examination were selected randomly for this study. Among them both male and female were in equal number. The study subjects were treated with 5 mg of Betamethasone orally on 2 consecutive days per week, for 3 months. Treatment response and side effects were monitored 4 weekly. The response was good in 60% and fair in 40% and there was no excellent response. This study indicates that further prospective placebo controlled studies are needed to clarify the efficacy of oral Betamethasone in lichen planus.

Key words: Lichen planus, Oral mini-pulse therapy, Betamethasone.

Introduction:

Lichen planus (Greek Leichen "tree moss"; Latin planus,"flat") is a common inflammatory disorder that affects the skin, mucous membranes, nails and hair[1]. This papulo squamous disease is characterized by small, flat topped, shiny, polygonal violaceous pruritic papules that begin as a pinpoint papulses and expand to plaques[2].

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The exact incidence and prevalence of lichen planus are unknown but overall prevalence is less than 1%[3]. It can affect all body areas and the sites of predilection being flexor surfaces (flexor wrist), mucous membrane and genitalia. In some cases, the eruption is very extensive[4]. It occurs throughout the world in all races. It may be familial in 1% to 2% of cases and is uncommon in children. Children represent only 4% of cases of lichen planus and their lesions are often atypical. The cause of lichen planus is still a subject of debate but several etiologies have been proposed. Both endogenous (genetic) and exogenous (environmental) components such as drugs and infection interact to elicit the disease[1]. Some concluded that the autonomic nervous system from the beginning takes an active part in the pathological process[5].

Lichen planus is a benign disease with spontaneous remission and exacerbation. Various modalities of treatments are available but none is curative. Some general measures like avoidance of exacerbating drugs, minimizing trauma to skin and mucous membrane lesions, good oral hygiene should be maintained. Mild cases can be treated with rest, topical steroids without wet dressing or occlusion.

Widespread lesions respond well to systemic corticosteroid[2,6] but tend to relapse as the dose is reduced.

Low molecular weight heparin given subcutaneously is highly effective. Other therapeutic options are griseofulvin, levamisole, metronidazole, dapsone, hydroxychloroquine, retinoids, methotrexate, azathioprine, cyclophosphamide, PUVA, Interferon alfa-2b, gold, antihistamines etc. The success rate is not satisfactory with these modalities of treatment, so there is a clear need for alternative therapy.

Lichen planus is usually a milder disease and corticosteroid is the drug of choice for its treatment[7]. However, when the disease is severe/extensive, corticosteroids in higher doses for a prolonged period may be required to control the disease and if they are used in a daily dosage they are likely to cause severe side effects[8]. Therefore we evaluated Betamethasone oral mini-pulse therapy to treat lichen planus.

Materials and Methods:

This prospective therapeutic trial was done among twenty patients with lichen planus attending the skin and VD outpatient department of Dhaka Medical College Hospital, Dhaka, Bangladesh over a period of 6 months From January 2005 to June 2005. Patients were diagnosed clinically and confirmed histologically. Patients with both sexes and age between 10-50 years who agreed to come on follow up examination were included and patients having concomitant diabetes, hypertension, fungal disease, peptic ulcer disease and other endocrine diseases were excluded from this study. The study group was treated with tablet Betamethasone (Tab. Betnelan 0.5mg) 10 tablets (5mg) daily for 2 consecutive days per week for 3 months. The clinical response of treatment was assessed by clinical examination and by scoring at each visit in every 4 weeks and was graded as:

Excellent (E) = Scoring 0-2, good (G) = scoring 3-4, Fair (F) = scoring 5-6, Poor (P) = scoring 7-8. The scoring was done on the basis of severity of itching, colour of the lesions and the gradation of lesions of lichen planus. The responses in each visit were endorsed into study protocol. 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 10-20 years and only 2 (10%) were in 21-30 years of age group (Table I).

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

Age in years	Number of patient (%)
10-20	10 (50)
21-30	2 (10)
31-40	4 (20)
41-50	4 (20)

Regarding sex distribution, 10 (50%) were male and 10 (50%) were female with a male to female ratio of 1:1 (Table II).

Table-II: Distribution of lichen planus by sex (n=20).

Sex	Number of patient (%)
Male	10 (50)
Female	10 (50)

According to site of involvement, 10 (50%) patients had widespread lesions, 6 (30%) had lower limbs, 2 (10%) had upper limbs and 2 (10%) had all limb involvement (Table III).

Table-III: Distribution of lichen planus by the sites of involvement.

Area of distribution	No. of patient (%)
Upper limbs	2 (10)
Lower limbs	6 (30)
All limbs	2 (10)
Limbs and other parts of body (widespread)	10 (50)

Regarding duration of lesions, 6 (30%) had 3-6 months of duration, 6 (30%) had >12 months, 4 (20%) had <3 months and 4 (20%) had 6-12 months of duration (Table IV).

Table-IV: Distribution of lichen planus by duration of lesions.

Duration in months	Number of patient (%)
<3 months	4 (20)
3-6 months	6 (30)
6-12 months	4 (20)
>12 months	6 (40)

Regarding the therapeutic response, maximum response to therapy was observed after 12 weeks of therapy where 60% were good and 40% were fair (Table V).

Table-V: Distribution of lichen planus by therapeutic response.

Response	4 week	8 week	12 week
Excellent	0	0	0
Good	4	8	12
Fair	12	12	8
Poor	4	0	0

Discussion:

In this prospective therapeutic trial, at the end of treatment it was found that, there was no excellent response but good and fair responses were in 12 (60%) and 8 (40%) cases, respectively (Table V). Our study is comparable to that of R Mittal et al[9] where there were excellent response in 60% of patients, and good response in 40% of patients. It is also comparable to the study done by Malhotra et al[10] where good to excellent response was seen in 68% of patients. Current study revealed similar result with somewhat difference. The variation may be due to geographical difference and variation in distribution and number of lesions.

The duration of the disease in this study cases was between ½ month to 5 years (mean 16.65 months) (Table IV), whereas the duration in the study group of R Mittal[9] was 1 month to 2 years, although the duration of drug therapy was the same.

In the present study, there was no side effect to therapy but one woman of 45 years of age developed fungal disease in axilla during therapy and responded to topical antifungal drug. This is similar to that of R Mittal et al[9]. In our study, four (20%) cases relapsed but there was no relapse in the study done by R Mittal et al[9].

In our study there were no side effects during Betamethasone oral mini- pulse therapy.

Conclusion:

Though the number of patients included in this study is too small to draw any conclusion, Betamethasone oral mini-pulse therapy. seems to be a better, safer and effective therapeutic modality in lichen planus. Therefore, it needs to be evaluated in a larger number of patients to establish its effectiveness, safety and superiority over the other existing therapeutic modalities.

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