INTRODUCTION

Intense pain in the involved dermatome precedes the appearance of the herpes zoster rash in more than 90% of cases.1 The patients mostly experience no symptoms beyond the duration of the illness. Unfortunately, postherpetic neuralgia (PHN) is the most common complication which affects 10-15% of all patients with zoster and at least 50% of patients older than 60 years of age.

Postherpetic neuralgia due to its agonizing nature requires immediate and effective treatment. Various therapeutic modalities including antiviral agents1, analgesics, transcutaneous nerve stimulators and acupuncture1, antidepressants2, anticonvulsants and topical capsaicin3 etc. have been used with only partial and transient relief. Corticosteroids when used by local infiltration either alone or with local anesthetics in the affected areas have given better results in the past. They are known to act by their anti-inflammatory effect. Their early administration in the healed lesions of herpes zoster prevent scarring of skin and peripheral nerves, thus reducing the chances of PHN.4,5

The objective of this study was to assess the efficacy of corticosteroid with lignocaine and compare this with lignocaine alone by local infiltration in the treatment of postherpetic neuralgia.

PATIENTS AND METHODS

The study was a randomized, single blinded, clinical trial with twelve weeks follow-up period. It was carried out from 1st September 2002 to 31st March 2003 at the Skin Centre of Military Hospital (MH), Rawalpindi. The study included the patients of both genders between 40-80 years of age. Persistence of pain for more than one month after the onset of herpes zoster was the most important inclusion criterion. After a detailed history, a thorough clinical examination, which included the blood pressure measurement, was done. All these patients were subjected to blood sugar, urea and creatinine examination and X-ray chest PA-view. The study excluded the patients who had any of the above investigations in the abnormal range and those with a history of recent intake of systemic steroids, antidepressants or antipsychotic drugs. Patients with a history of diabetes, hypertension, glaucoma, or a known hypersensitivity to lignocaine were also excluded.

These patients were randomly assigned to group- II or I. They were called on fortnightly basis. The affected dermatome was selected, and the scarred areas were marked. A 50 ml syringe with a 27 gauge needle was used for the injections and the medicines were injected intralesionally. Patients in group-I received a mixture of 1 ml of 40 mg/ml of injection triamcinolone acetonide with 5 ml of 2% lignocaine in 44ml of distilled water (a total of 0.8 mg/ml of triamcinolone acetonide) for local infiltration in postherpetic scars. Patients of group-II received the same combination, but without lignocaine alone in the treatment of postherpetic neuralgia.

ABSTRACT

Objective: To assess the efficacy of local infiltration of corticosteroid with lignocaine compared to lignocaine alone in the treatment of postherpetic neuralgia.

Design: A randomized clinical trial.

Place and Duration of Study: The Skin Department, Military Hospital, Rawalpindi from September 2002 to March 2003.

Patients and Methods: Sixty patients were selected for the study. They were randomly assigned to two groups. Group-I received injection triamcinolone acetonide with lignocaine and group-II was given injection lignocaine alone. Three injections were given to each patient at fortnightly interval and pain relief was assessed by visual analogue scale at 6 and 12 weeks following the first injection.

Results: Follow-up at 6 weeks showed complete pain relief in 63.3% (n=19) patients of group-I in comparison to 16.6% (n=5) of group-II. Chi-square value was 13.3 (p<0.001). At 12 weeks follow-up group-I showed further improvement with complete pain relief in 83.3% (n=25) whereas group-II showed diminishing response with cure rates falling to 6.6% (n=2). Chi-square value was 35.6 (p<0.001).

Conclusion: Locally infiltrated injection triamcinolone acetonide with lignocaine was significantly more effective than injection lignocaine alone in the treatment of postherpetic neuralgia both at 6 and 12 weeks follow-up.

A total of 60 patients were included in the study. Out of these, 56 were males and only 4 were females. The age ranged from 40 to 80 years with mean age of 61.25 ± 11.32 years. All 60 patients who were selected for the study completed their 12 weeks follow-up. The two groups were well-matched. Mean age of group-I was 61.06 ± 11.43 years and of group-II was 61.43 ± 11.41 years.

After 6 weeks of the first injection, good response was obtained in 63.3% (n=19) patients of group-I, in comparison to 16.7% (n=5) in group-II. Group-I showed further improvement at 12 weeks follow-up, when 83.3% (n=25) patients were completely cured. On the contrary group-II displayed diminishing responses when assessed at 12 weeks with the cure rates of only 6.6% (n=2). Overall 16.7% (n=5) patients of group-I showed poor response as compared to 93.3% (n=28) in group-II at 12 weeks follow-up (Table I). The failure rate in the patients of group-I was high in the elderly patients (60-80 years) and in those patients who were suffering from PHN since long (9 months-1 year). Eight patients of group-I developed some skin atrophy locally; however, no side effect was noted in group-II.

Table I: Pain relief response rate in group I and II at 6 and 12 weeks of follow-up.

<table>
<thead>
<tr>
<th>Pain relief response rate</th>
<th>Percentage in group I (n=30) at 6 weeks</th>
<th>Percentage in group II (n=30) at 6 weeks</th>
<th>Percentage of group I (n=30) at 6 weeks</th>
<th>Percentage of group II (n=30) at 6 weeks</th>
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<tbody>
<tr>
<td>Good</td>
<td>63.3% (19)</td>
<td>16.7% (5)</td>
<td>83.3% (25)</td>
<td>6.6% (2)</td>
</tr>
<tr>
<td>Unsatisfactory</td>
<td>36.7% (11)</td>
<td>83.3% (25)</td>
<td>16.7% (5)</td>
<td>93.3% (28)</td>
</tr>
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As far as the side effects of treatment were concerned, 8 patients (26%) belonging to group-I developed some localized atrophy at the injection site in comparison to no such reports in previous two studies. There were, however, reports of giddiness and sweating in some patients of the previous two similar studies, which was possibly an early side effect of local anesthetics. The difference in side effects might possibly be explained by the different types and dosage of steroids used. Fortnightly use of intralesional steroids might have contributed to the increased incidence of local side effects in our steroid group, whereas in Jaipur and Multan studies the topical side effects were not noticed because the steroid mixture were administered at 6 weekly intervals. As far as the side effects of local anesthetics were concerned, use of significantly lower concentration of lignocaine avoided any side effects in our study, which were seen in some patients of both the previous studies.

Comparison of the results of the two groups in the study clearly demonstrated an edge of triamcinolone acetonide with lignocaine (group-I) over lignocaine alone (group-II ). The poor response to the treatment in group-II was similar to many previous studies, which used lignocaine, prilocaine and mepivacaine for local or intravenous injection.
higher concentration of the local anesthetic may be used for better results but this may increase the risk of side effects. Lastly, the failure rates in both the groups in this study showed an upward trend in patients of older age and in those suffering from the disease for more than 9 months. These findings were not highlighted in any of the previous studies.

**CONCLUSION**

The combination of triamcinolone acetonide and lignocaine, when used for local infiltration is highly effective in the treatment of postherpetic neuralgia, as compared with injection lignocaine alone. It is suggested that long-term follow-up studies may be conducted with different corticosteroids alone or in combination with local anesthetics to further assess the efficacy of this type of treatment in postherpetic neuralgia.

**REFERENCES**
