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RESEARCH ARTICLE

COMPARISON OF INTRA-LESIONAL TRIAMCINOLONE AND 2% XYLOCAINE IN THE TREATMENT FOR POST- HERPETIC NEURALGIA

**Sadaf Ahmed Asim¹, Asim Hameed², Jawwad Us Salam³, Qamar Un Nisa⁴, Sadia Iqbal⁵,
Firasat waqar⁶ and Muhammad masroor⁷**

¹Department of Dermatology, DIMC, DUH

²Incharge Department of Rehabilitation, CHK

^{3,4}Department of Neurology, DIMC, DUH

⁵Department of Medicine, DIMC, DUH

⁶Department of Medicine, KMDC

⁷Medicine, DIMC, DUH

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ABSTRACT

Objective: To assess the efficacy of local infiltration of triamcinolone (40mg/ml) with distilled water compared to 2% xylocaine alone in the treatment of post herpetic neuralgia (PHN).

Design: A comparative interventional clinical study.

Place and Duration of Study: The Skin Department, at Dow University Hospital from July 2015 to June 2016.

Patients and Methods: A total of 58 diagnosed patients of Post Herpetic Neuralgia aged between 21 to 82 years were included in the study. In triamcinolone group; Intralesionally mixture of triamcinolone(40mg/ml) to distil water ratio 30/70% were injected with help of fine needle insulin syringe while in other group 2% xylocaine were injected. Post-herpetic neuralgia pain was observed by visual analogue scale (VAS) before intralesionally injected and follow-ups periods. Final pain assessment observed after 2month.

Results: Out of 58 patients in this study, Overall male to female ratio was 1.4:1. 21 to 82 years with overall mean±SD age of patients was 49.59±12.5 years. On follow ups period upto 2 month, mean+SD pain of 2% xylocaine and triamcinolone observed via visual analogue scale were statistically best results in triamcinolone group as compared to 2% xylocainegroup {(triamcinolone; Before Rx 6.93±1.62, After Rx. 3.75±1.89; p=0.001) (2% xylocaine; Before Rx 6.59±1.24, After Rx. 4.52±1.78; p=0.001)}.

Conclusion: The combination of triamcinolone with distil water, used for local infiltration is very effective in treating neuralgia, compared with the injection of 2% xylocaine alone.

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INTRODUCTION

Post-herpetic neuralgia (PHN) is the most common problem of herpes zoster or shingles. It has been widely defined as pain that remains after healing of herpes zoster lesions or rash, usually after three month. Clinicians have to face multiple problems during the treatment and that frustrate patients as well as doctor¹. There are several factors, such as persistent low viral replication or permanent pathological changes due to inflammation caused by herpetic infection that lead to aberrant function of the nervous system². Postherpetic neuralgia because of its painful nature requires prompt and compelling treatment. Different modalities including antiviral agents, analgesics, transcutaneous nerve stimulants and acupuncture, antidepressants, anticonvulsants and topical capsaicin and so forth have been utilized with just halfway and transient help. Corticosteroids when used by local infiltration either alone or with local anesthetics in the affected areas have given better results in the past^{3,4}.

One drug may, given slightly better performance in past years; a corticosteroid is applied at the site affected by local infiltration alone or in combination with a local anesthetic. The anti-inflammatory effect. It is said that if the drug penetrated cure herpes zoster lesions in the initial stages, the chances of post-herpetic even decrease. That fact is a strong corticosteroid fair value, and the studies published to discourage use is weak^{5,6}.

The objective of this study was to assess the efficacy of corticosteroid with distil water and compare this with xylocaine alone by local infiltration in the treatment of postherpetic neuralgia. This will help answer what is best for the treatment of post herpetic neuralgia by reducing pain and improving quality of life.

Patients and Methods

This comparative clinical study was carried out at Skin ward, Dow University Hospital from July 2015 to June 2016.

Diagnosis of Post Herpetic Neuralgia age between 21 to 82 years was based on the comprehensive clinical interview

regarding onset on disease, duration of persistent pain after resolving of disease and general physical examination. Those patients who had any history of glaucoma, history of taken systemic steroids or antidepressants or antipsychotic drugs, known hypersensitivity to xylocaine were excluded. Scar area was marked and the involved dermatome was mentioned. In triamcinolone group; Intralesionally mixture of triamcinolone (40mg/dl) with distil water ratio 30/70% was injected with help of fine needle insulin syringe while in other group 2% xylocaine was injected. Each drug was infiltrated by 2 insulin syringes after all aseptic measures.

Post-herpetic neuralgia pain was observed by visual analogue scale (VAS) before intralesionally injected and during follow-ups periods. A VAS consists of a line, usually 10cms long whose ends are labelled as 0-for No pain to 10 for worst pain hampering the daily routine work or sleep. After 15 days 1st followed and observed the pain, 2nd intralesionally infiltration was done if required. Final pain assessment observed after 2month.

RESULTS

Gender distribution of both group. Out of 58 patients in this study, 34 (57.6%) were male and 24(40.7%) were female. Overall male to female ratio was 1.4:1(Table No.1).

The age range of patients was between 21 to 82 years with overall mean±SD age of patients was 49.59±12.5 years. There were 29 patients each in both groups. Mean±SD ages in two groups (Triamcinolone (40mg/dl) with distil water ratio 30/70% and 2% xylocaine) were 45.93±15.4 years and 53.24±7.0 years respectively, difference between two means was statistically significant (p-value = <0.001).

Majority of the patients (22.41%) in this study had diabetes mellitus as co-morbidity. The second commonly observed co-morbidity was hypertension 7(12.06%) cases.

Table No1 Demographic variable

Variable	2% xylocaine	Triamcinolone with distil water ratio 30/70%
	No.Patients (%)	No.Patients (%)
Gender		
• Male	20(68.96%)	14(48.27%)
• Female	9(31.03%)	15(51.72%)
Age		
• Mean Age(years)	53.24±7.0	45.93±15.4
Region		
• Chest	6(20.68%)	9(31.03%)
• Trunk	2(6.89%)	0(0%)
• Thigh	2(6.89%)	4(13.79%)
• Face	2(6.89%)	3(10.34%)
• Neck	5(17.25%)	5(17.25%)
• Abdomen	4(13.79%)	3(10.34%)
• Back	2(6.89%)	1(3.44%)
• Hip	4(13.79%)	1(3.44%)
• Arm	2(6.89%)	1(3.44%)
• Lumber	0(0%)	2(6.89%)
Co-morbidities		
• Hypertension	6(20.68%)	1(3.44%)
• Diabetes mellitus	4(13.79%)	9(31.03%)
• Hypothyroid	2(6.89%)	3(10.34%)
• Tuberculosis	2(6.89%)	3(10.34%)
• Urinary Tract Infections	4(13.79%)	0(0%)
• None	11(37.93%)	13(44.82%)
P value	0.034	

The difference between groups in term of co-morbidities was statistically insignificant (p = 0.034) (Table No.1).

On follow ups period upto 2 month, mean+SD pain of 2% xylocaine and triamcinolone with distil water ratio 30/70% observed via visual analogue scale were statistically best results in triamcinolone group as compared to 2% xylocaine group {(triamcinolone with distil water ratio 30/70%; Before Rx 6.93±1.62, After Rx. 3.75±1.89; p=0.001) (2% xylocaine; Before Rx 6.59±1.24, After Rx. 4.52±1.78; p=0.001)} (Table No.2, Figure No.1).

Table No.2 Pain Score before and after treatment

Pain Score	2% xylocaine	Triamcinolone with distil water ratio 30/70%
	No.Patients (%)	No.Patients (%)
Before Treatment		
• Means±SD	6.59±1.24	6.93±1.62
After Treatment Follow-up period upto 60days		
• Means±SD	4.52±1.78	3.75±1.89
P - value	<0.001	<0.001

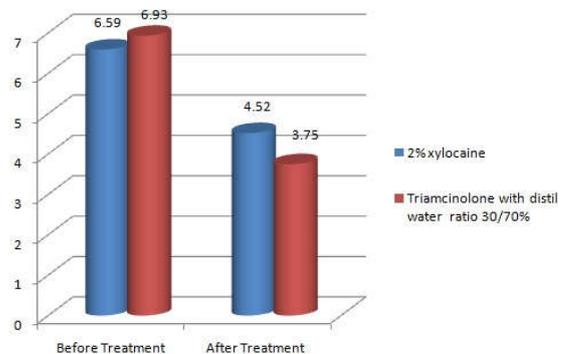


Figure No.1 Pain Score before and after treatment

DISCUSSION

Post herpetic neuralgia is a debilitating complication of HZ. The risk of PHN after HZ increases with age. In a large population-based study, the rate of PHN (defined as at least 90 days of documented pain) increased from 5% in those younger than 60 years to 10% in those aged 60 to 69 years and to 20% in those aged 80 years or older⁷. However in our study overall mean±SD age of patients was 49.59±12.5 years. Similarly study of Watson P showed that Postherpetic neuralgia is the most common complication of herpes zoster. It occurs in approximately 30 percent of patients older than 80 years and in approximately 20 percent of patients 60 to 65 years; it is rare in patients younger than 50 year⁸.

The males were affected more than females. In a large retrospective study, M.N. Oxman reported male 11,403(59.2%) case and female Female 7,867 (40.8%) cases⁹. In our study male is dominant, 34 (57.6%) were male and 24(40.7%) were female. Overall male to female ratio was 1.4:1.

There is no single option consistently effective treatment for PHN, but intensity of pain successfully reduced by multiple treatment options. At present, the only therapies that are Food and Drug Administration (FDA)-approved for the treatment of postherpetic neuralgia are lidocaine, capsaicin patches, gabapentin and pregabalin. Some of them, which relate to various aspects of the treatment of PHN in the recent meta-

analysis focuses on reducing pain percent among patients participating in randomized controlled trials¹⁰.

Numerous studies evaluating this issue to be taken, but the results were mixed. Based on the results of many studies reports of the efficacy of topically applied local anesthetic mixtures and locally infiltrated local anesthetics in the skin, peripheral nerves, or paravertebral or epidural spaces in patients with postherpetic neuralgia with only short period relief. Various therapies commonly are used analgesics, peppermint oil, antiviral agents, anticonvulsants, antidepressants, nerve block, antipsychotic therapy, transcutaneous nerve stimulants (TCNS) and acupuncture¹¹⁻¹⁴. There are few published reports that describe the successful use of steroids lesion neuralgia¹⁵⁻¹⁹. Epstein published a report in 1976 patients with herpes zoster and PHN 88 patients successfully treated with triamcinolone intradermally in saline with minimal side effects. Some further successful result obtained in Multan Pakistan¹⁷ and Jaipur India¹⁶ after added intralesional steroids with injection lignocaine.

Currently, Edelsberg and colleagues²⁰ conducted a systematic review and meta-analysis of randomized controlled trials to evaluate the efficacy data, safety and tolerability of drugs used to treat neuralgia. Focuses primarily see one measure of efficiency is the percentage decrease in pain intensity from baseline to the end, as measured by the numeric rating scale (NRS), visual analog scale scales (VAS) or other interval. Treatment of PHN is a challenge till date for clinicians and multifactorial approach is the best way to solve this painful our patients to resolve.

Study of Mohammad Amjad⁵ reported the combination of intralesional triamcinolone and lignocaine was able to cure 83.3% patients at 12 weeks after the first injection. Another study Jaipur¹⁶ study, which reported a success rate of 85% with intralesional dexamethasone in combination with local anaesthetic at 12 weeks, and 96% at 18 weeks of follow-up. In the Multan study the response rate was slightly less¹⁷.

Comparison of the results of the two groups in the study clearly demonstrated an edge of triamcinolone with distil water ratio 30/70% over 2% xylocaine alone. The poor response to the treatment in lignocaine alone was similar to many previous studies, which used lignocaine, prilocaine and mepivacaine for local or intravenous injection. In our study pain assessed with the help of visual analogue scale upto 2 month follow ups period were statistically best results in triamcinolone group as compared to 2% xylocaine group {(Triamcinolone with distil water ratio 30/70%; Before Rx 6.93±1.62, After Rx. 3.75±1.89; p=0.001) (2% xylocaine; Before Rx 6.59±1.24, After Rx. 4.52±1.78; p=0.001)}.

However, Sadaf Ahmed Asim⁶ study also reported similar results and that the decline in the average pain to get that evidence from 6.86 to 3.72 after the therapy is the treatment of post-herpetic very helpful and valuable by intralesional triamcinolone.

CONCLUSION

The combination of triamcinolone with distil water ratio 30/70%, used for local infiltration is very effective in treating neuralgia, compared with the injection of 2% xylocaine alone.

This is a common infection and a common complication observed in our out

patients, patients take long term medications in heavy doses for indefinite periods with variable response. This treatment offers an affordable quick symptomatic relief to all pts and thus they can avoid long term combinations.

Recommended that some further studies may be conducted with corticosteroids alone or in combination with local anesthetics to evaluate the efficacy of this type of treatment in post herpetic neuralgia.

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