Case Report

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Successful management of thoracic post herpetic neuralgia and exploring Jaipur field block as a treatment modality

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Introduction

Post herpetic neuralgia (PHN) is a well-known and common complication of Herpes Zoster infection/Shingles, affecting the daily activities of a patient and ultimately the quality of life. PHN is defined as pain in a dermatomal distribution that lasts for at least 90 days after an outbreak of herpes zoster. It results due to reactivation of varicella virus and occurs due to damage to a peripheral nerve presenting as a burning, electric shock like pain, with increased sensitivity to general touch which would not otherwise cause pain.[1] Many treatment strategies have been proposed and tried for this condition not only by pain physicians but also by dermatologists. Our patient consulted a dermatologist first, who diagnosed her as a case of post herpetic neuralgia and treated her with JAIPUR block twice, one month apart. Jaipur block is a well-known entity amongst dermatologists and the patient achieved satisfactory pain relief post procedure but the Numerical rating score (NRS) rose to 6 both times through 1 month post procedure. Thus patient was referred to us for further management and we gave two Ultrasound guided intercostal blocks 1.5 months apart. The patient achieved good pain relief with NRS score 1 even after 1 year of follow-up. In this course of events we explored Jaipur block, which might be of help in to patients with financial constraints or who don't want an invasive procedure.

Case

28 year old woman came to our OPD with a history of Herpes Zoster in the 5th intercostal area dermatome on the right side 7 months back. She had consulted a dermatologist for the same 3 months back who treated her with a short course of corticosteroids, NSAIDS and Anticonvulsants with no pain relief. So was treated with Jaipur block (10 ml 0.5% Bupivacaine mixed with dexamethasone 8 mg and 10 ml of 2 % lignocaine, a total of 20 ml solution and infiltrated it in the affected dermatome subcutaneously with a 26 G needle) with omit a satisfactory pain relief after the procedure and NRS came down to 2. But the pain gradually increased to 8 in one month so the Jaipur block was repeated, with satisfactory pain relief. It eventually rose to NRS 6 in one month again, all this while the patient t was not compliant with the medicines prescribed to her.

She came to our Pain OPD with a pain score of 6. After taking a proper history we explained to her all the treatment options available and after proper counseling, she chose Jaipur block to be repeated but agreed to take medicines. We also noticed that she was depressed due to pain and this pain was affecting her personal life. So we administered Jaipur block as per her dermatologist records with the same dose. The patient got good pain relief and NRS dropped 1 post procedure. The patient was started with Gabapentin 400 mg twice a day, Tablet Amitriptyline 10 mg HS, Tablet Tramadol 50 mg sos and Lignocaine5 %w/w-Gabapentin6%w/w gel for topical use thrice a day on the affected area.

On follow-up after 1 month her NRS rose to 5 and after proper counseling and patients consent we administered her ultrasound guided right sided 4,5,6th Intercostal nerve block twice with a gap of 1.5 months, with NRS of 0 post procedure, thereafter patient was followed up at1month, 3months, 6 months and 1 year. She had omit a very good pain relief with an NRS of 1 even after 1 year.

Discussion

PHN is distressing and debilitating to the patient, affecting the quality of life. Many modalities have been tried to control/treat PHN with variable success eg s/c Botulinum toxin, triamcinolone, TENS, Peripheral nerve stimulation, stellate ganglion block, Paravertebral block, intercostal block, pulse radiofrequency ablation, spinal cord stimulation[2] and anticonvulsants, antidepressants, opioids, topical capsaicin, topical lidocaine, etc.[3,4-7] Our patient initially was treated with Jaipur block which was first described in 1998 in which the affected dermatome is infiltrated subcutaneously with 2% lignocaine, 0.5 % bupivacaine and 4mg dexamethasone solution mixture which provided satisfactory pain relief in our patient post procedure but had to be repeated after 1 month due to gradual increase in pain score.

Local anaesthetics act by suppressing sodium channels and decreasing ectopic discharges, thus reducing membrane excitability. Lignocaine has a faster onset of action and the duration of action is around 2 hours vs. Bupivacaine, although slow to act but has a continuous activity for a longer time 4-8 hours.[8] The benefit of combining corticosteroids with local anaesthetics is that it decreases Interleukin-8 around the nerves and decreases inflammation.[8,9] It also stabilizes the membrane and suppresses the ectopic discharges of C fibers and decreases central sensitization.[10]

R Bhargava et al.4 found that 90% patients obtained complete pain relief after the block and a follow-up of 19 years and claimed that 28 % of patients got pain relief post-first injection, 57% after the second injection and 11% after third injection and 4% not responding to treatment. Another study by Neerja Puri et al.[6] concluded that

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20% patients had complete pain relief after first injection, 60% after the second injection,10%after the third injection and 10 % did not respond and claimed that non-responders were with a chronic history of PHN more than 2 years and old age >60 years. Another article by Reena K Sharma et al.[7] used higher concentration of dexamethasone to check for any changes in findings and concluded that if the duration of PHN is more, the recurrence rate is higher and claimed that Jaipur block is a safe and effective treatment for PHN.

Our patient had received a Jaipur block from a dermatologist twice before coming to us with satisfactory pain relief but lasting for only a few days as it gradually increased to 6/10 in 1 month both times. The patient had poor compliance with the medicines. When she visited us her pain score was 6/10 but she still insisted on getting a repeat Jaipur block based on her previous experience.

On 1 month follow up her NRS rose to 5. So after proper a proper explanation of the procedure we gave her ultrasound guided right sided 4,5,6th Intercostal nerve block. Her NRS was 0 post procedure, which rose to an NRS of 3 after 1.5 months. A repeat intercostal block gave her a very good and long-lasting relief this time. The patient was followed up at 1month, 3months and 6 months and had very satisfactory pain relief with an ARS of 1. Her medicines were also tapered off slowly by the end of 6 months.

Many dermatology studies claim that Jaipur block is very effective in Post herpetic neuralgia in a good percentage of patients even after long follow-up, and therefore an exploration of this pain block even in our pain management practice practice might prove beneficial. It is quite an easy block a low learning curve, and minimal complications and can be easily practiced. Neerja Puri et al.[6] stated above claimed good and long-term pain relief in a good percentage of patients except for the group with long-term history of PHN and age more than 60 years. Our patient has been suffering from PHN for 1 year and therefore the short-term pain relief to Jaipur block might be explained due to its chronicity.

Although in our patient, pain relief was transient with it however, there is a possibility that it might have given better results with repeated blocks. Also, the patient if had been compliant with medicines prescribed like anticonvulsants and antidepressants etc. might have given better results and can't be predicted. Therefore more studies related to Jaipur block need to be done to assess its applicability in our pain practice.

Conclusion

In dermatology practice Jaipur block is a well-known entity with good results in Post herpetic neuralgia patients even on long-term follow-up. Jaipur block needs to be explored more and thus the option should be kept open of offering it to patients when planning treatment. It is a non-invasive procedure, has a low learning curve with minimal side effects and is cost-effective. However, its efficacy needs to be studied properly before drawing proper conclusions. This block is not practiced commonly by pain physicians other procedures like intercostal block, peripheral nerve stimulation, pulse radiofrequency, spinal cord stimulation etc. are practiced more. Thus would like to conclude that this Jaipur block can also be kept under consideration while planning treatment for a specific group of patients.

Acknowledgments

None.

Conflicts of Interest

None.

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