

# A Year of Painful and Sleepless Nights in Geriatric Case!!! Due to Post Herpetic Neuralgia (PHN)-? Can be Managed with Para-Vertebral Block

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Publication Date: 2025/05/06

**Abstract:** Post-herpetic neuralgia (PHN) is common in elderly, covid-19 and immunocompromised patients and is characterised by persistent neuropathic pain, which occurs after an outbreak of shingles (herpes zoster). Patients with HZ have severe pain affecting psychology, quality of life and daily living. Here we had a 74-year-old Male patient of low socioeconomic status with DM & Asthma referred to the pain clinic with complaints of sleepless nights, altered moods/emotions and pain on the right midaxillary line on rib T7-T10 level radiating from the back to the abdomen since 1 year. PHN in the elderly having comorbidities can be successfully managed by paravertebral block with excellent pain relief and recovery from one-year sleepless nights, offering better quality of life. This case alarms health care services to create awareness in the prevention of herpes zoster and vaccination in the geriatric population.

**Keywords:** Elderly, Herpes Zoster, Post-Herpetic Neuralgia, Paravertebral Block, Analgesia Treatment, Chronic Pain.

**How to Cite:** Surekha Chavan; Dr. Vaibhav Mohansing Solanke; Dr. Anju Paul; Dr. Chetankumar V. Adrat; Dr. Harshad Mangaldas Mahajan; Dr. Daniel Saji; Dr. Kshitija Dipak Tonapi. (2025). A Year of Painful and Sleepless Nights in Geriatric Case!!! Due to Post Herpetic Neuralgia (PHN)-? Can be Managed with Para-Vertebral Block. *International Journal of Innovative Science and Research Technology*, 10(4), 2514-2516.  
<https://doi.org/10.38124/ijisrt/25apr1748>

## I. INTRODUCTION

Post-herpetic neuralgia (PHN) is characterised by chronic persistent nerve pain, which occurs after outbreak of shingles (herpes zoster- HZ), which affects up to a third of patients with HZ with increased risk in elders and patients of Covid -19. The pain is burning, stabbing, aching and persist long after the rash caused by shingles has healed. Neuropathic pain syndrome, characterized by pain that persists for months

or years after resolution of HZ rash, is caused by reactivation of varicella zoster virus (VZV), which starts residing latently in the body after a primary varicella (chickenpox) infection, which may have occurred decades earlier.

Postherpetic neuralgia occurs most commonly in elderly people and in people with immunocompromise. Cases are reported in literature of PHN in patients with history of critical covid-19 to be at high risk. Patients with HZ have

severe pain affecting psychology, quality of life and daily living. In the first line treatment of PHN, Tricyclic antidepressants (Amitriptyline), anticonvulsants (pregabalin) and topically administered local anaesthetics are found useful.

## II. CASE DETAILS

A 74yr old Male of low socioeconomic group, known case of Diabetes mellitus & Bronchial Asthma was referred to the pain clinic by the treating dermatologist. Patient had chief complaints of sleepless nights, altered moods/emotions and pain on right midaxillary line on rib T7-T10 dermatomes radiating from back to abdomen since 1year. Nature of the pain was constant burning pain (NRS 5) with intermittent electric shocks like feeling (NRS >7).

### ➤ Past History:

DM since 10 years, Rx T. Metformin 500 mg BD. ii. Bronchial Asthma for 10 years, Rx T Deriphylline 1BD. iii. Herpes Zoster infection 1yr back, followed by severe pain at the T7-T10 dermatomes, touching the post-vesicle area generated severe “electricity-like” sensation. Drug treatment received was Tab. Acyclovir 800 mg five times a day for 7 days. iv. Episode of Acute Varicella zoster infection in childhood. v. h/o COVID-19 with ICU admission for ventilatory support. iv. h/o Drug allergy- for metronidazole, Penicillin, Sulfa and analgesics: PCM, diclofenac.

After taking history and examination of patient differential diagnosis of Post herpetic Neuralgia was made and for treatment of severe pain, we planned to give elective paravertebral block on the level of T7 to T10, to relieve the pain of post herpetic neuralgia. Investigations were done for CBC, BSL HIV, HBsAg, ECG and CXR.

On 4th Nov 2023 at 2pm, patient's consent and NBM status was confirmed and patient was taken inside Operation Theatre. On OT table, 20G intra-Cath was secured on right upper limb, IV fluid was started, multi-para monitors were attached and sitting position given to the patient Under AAP, Paravertebral block on right side at T7 to T10 level was given with 20 G, 1.5-inch length hypodermic needle with drugs; injection Bupivacaine 0.25% 10cc + injection lignocaine 1% 6cc + injection Dexamethasone 8mg given after negative aspiration confirmation.

For assessment of efficacy and quality Pain relief, we measured with following scores.

- Numerical rating score.
- Sleep interference score

According to the Numerical Rating score: on 4<sup>th</sup> Nov (PVB block @ 2pm) after 5 min score was 3/10, After 10min score was 3/10, After 1hr score was 4/10, At 6pm score was 5/10

On 5 nov 2023 at 2 am score was 8/10 (12hrs after the block)

On 6 nov 2023 at 12pm score was 8/10

Patient was able to sleep without any disturbances after almost a year! Follow up was taken after 15 days. A repeat block was given after one month. Patient has resumed good quality of life in terms of pain free, good sleep with recovery from emotional and psychological disturbances.

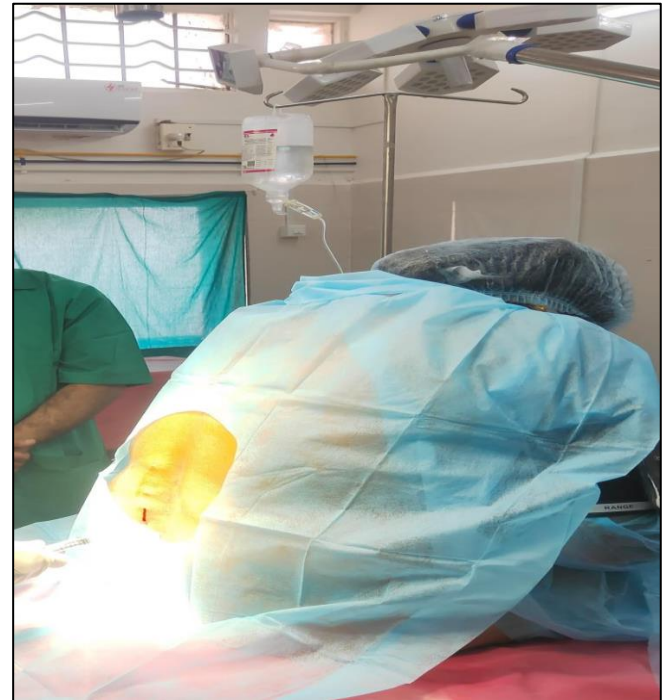


Fig 1 Paravertebral Block in a 74 Years Aged Male with Post Herpetic Neuralgia.

## III. CASE DISCUSSION

Incidence of acute HZ in Europe is 1.2-5.2/1000, lifetime risk in general is estimated to be 25%, risk rises to 50% in aged >85 years. Common risk factors for PHN after a shingles outbreak are:

Increasing Age, severe pain during shingles, large area affected by shingles, weakened immune system, Ophthalmic shingles (Herpes Zoster Ophthalmicus), underlying comorbidities, delayed treatment of shingles, Female gender, Low socioeconomic status, etc.

*In our case, the patient was belonging to a geriatric age group (74 yrs). He was from low socioeconomic status, previously labourer by occupation but then he became beggar as he could not work efficiently due to post herpetic neuralgia. He was also having associated multiple comorbidities like Type 2 Diabetes Mellitus, Bronchial Asthma, and weakened immune system due to chronic diseases and previous history of severe Covid-19.*

### ➤ Clinical Features in PHN:

Pain: it is persistent, often intense, burning, stabbing, or aching pain in the area where the shingles rash appeared. The pain is typically limited to the area of skin where the shingles rash was present. The pain can be so much severe and

debilitating, affecting daily activities and quality of life. PHN can lead to significant physical, emotional, and psychological distress, including sleep disturbances and depression. Nerve pain tends to be more intense at night, which can disrupt sleep cycles. Constant pain combined with poor sleep can lead to physical and emotional exhaustion, contributing to feelings of hopelessness and despair. The inability to perform daily activities without discomfort may contribute to feelings of isolation, frustration, and low self-worth. Constant worry about managing pain and its impact on daily life can worsen depressive symptoms. *Our patient had severe pain disturbing his sleep, emotions, psychology, loss of job and quality of life. As a consequence of this, he became beggar and later on he was supported by NGO.*

#### ➤ Prevention of Herpes Zoster:

Preventing postherpetic neuralgia (PHN) involves reducing the risk of developing shingles in the first place, as PHN is a complication of the shingles virus. Preventive measures: The best way to prevent PHN is by getting vaccinated with Shingles Vaccine (Zoster Vaccine). Two doses of the chickenpox vaccine are recommended for children as the best way to protect against chickenpox (varicella). People who have never had chickenpox or received chickenpox vaccine should get 2 doses. Most people who get the vaccine will be protected for life and not get chickenpox. *Our patient gives history of chicken pox in childhood and no vaccination.*

#### ➤ Treatment:

Managing the risk factors, especially by timely antiviral treatment, can help reduce the risk of developing postherpetic neuralgia. Timely Antiviral Medication is very important. Starting antiviral treatment (e.g., acyclovir, valacyclovir, or famciclovir) within 72 hours of the rash's appearance can reduce the severity of the infection and lower the risk of developing PHN. *Our patient was treated with Acyclovir course, but afterwards he started suffering from PHN.*

#### ➤ Various Drugs are Tried and Effective to Alleviate the Pain in PHN Like;

Anticonvulsant like Gabapentin, Pregabalin, Ibuprofen for analgesia, Antidepressants like Nortriptyline, Amitriptyline, Opioids like Tramadol and Lidocaine for Topical use. Epidural /Intrathecal use of Methylprednisolone with Local Anaesthetic and Paravertebral Block offers best pain relief in PHN cases. But NSAIDs and Antiviral are not effective once PHN has set in. *Our patient was had drug allergy to analgesic NSAIDs & Paracetamol. He was successfully treated with paravertebral block and oral Pregabalin.*

## IV. CONCLUSION

An elderly patient having PHN and multiple medical comorbidities was successfully managed by paravertebral block at T7 to T10 dermatome and Tab. Pregabalin with excellent pain relief and recovery from sleepless nights of one year offering better quality of life.

Coordinated multidisciplinary team approach consisting of pain physician (anaesthesiologist) and dermatologist is essential for implementation of treatment modalities for pain in PHN cases. Anaesthesiologists play crucial role as pain physician in treating the pain occurring due to PHN by various interventions.

#### • Prevention is better than cure!

This case alarms the health care services for creating awareness in prevention of herpes zoster and vaccination in geriatric population.

#### • Happy aging! Healthy Aging!!

## ACKNOWLEDGEMENT

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