Effectiveness of pregabalin as a secondary treatment for neuropathic pain from postherpetic neuralgia

Jonathan Kopel, BS^a and Gregory L. Brower, DVM, PhD^b

^aSchool of Medicine, Texas Tech University Health Sciences Center, Lubbock, Texas; ^bDepartment of Medical Education, Texas Tech University Health Sciences Center, Lubbock, Texas

ABSTRACT

Herpes zoster or shingles causes a severe painful rash that spreads along dermatomes in the face or chest wall, which leads to a condition known as postherpetic neuralgia (PHN). There is no cure for PHN, but there are many treatments to reduce pain duration and severity. In this case report, we describe a patient treated for PHN using pregabalin (Lyrica) after failure with gabapentin. Despite being listed as a controlled substance by the Food and Drug Administration, pregabalin may be an effective first-line therapy for PHN and other forms of neuropathic and chronic pain.

KEYWORDS Lyrica; neuropathic pain management; postherpetic neuralgia; pregabalin

Herpes zoster or shingles is a potential complication arising from the reactivation of dormant varicella zoster virus in dorsal root ganglion.¹ This reactivation causes a severe painful rash that spreads along dermatomes in the face or chest wall, which leads to postherpetic neuralgia (PHN).¹ In most cases, PHN occurs in older patients and persists even after the rash has cleared.¹ The pain with PHN and shingles is often described as burning or stinging and sometimes includes itching, aching, and pain paroxysms.¹ Currently, there is no cure for PHN, but there are many treatments to reduce pain duration and severity.² Lidocaine patches, gabapentin, pregabalin, serotonin norepinephrine reuptake inhibitors, and tricyclic antidepressants are first-line therapies; opioid analgesics are suggested as second- or third-line options due to the addiction potential. In this case report, we describe a patient treated for PHN with pregabalin.

CASE REPORT

A 58-year-old man presented with severe pain on his lower left axilla for several weeks. The pain began worsening 2 days earlier and was described as burning and tingling. He denied any history of smoking, alcohol, or other substance abuse. The patient had hypertension, hyperlipidemia, diabetes mellitus, hypothyroidism, obstructive sleep apnea, and obesity (body mass index, 43.9 kg/m²). His current

medications included pioglitazone, ipratropium bromide, insulin glargine, montelukast, levocetirizine, atorvastatin, azelastine, bisoprolol, levothyroxine, lisinopril, metformin, triamcinolone, and aspirin. His blood pressure, temperature, and heart rate were 120/75 mm Hg, 98.2°F, and 75 beats/min, respectively. The patient was not on any immunosuppressive drugs and had no history of recent infections.

The left axilla showed a blistering, painful rash (*Figure 1*), with an erythematous/purple base and vesicles in different stages extending from the left chest along dermatomes around the left axilla and upper back. When pressure was applied, the rash drained clear fluid. The patient denied prior shingles episodes or receiving the shingles vaccine. PHN was diagnosed and the patient was prescribed 300 mg oral capsules of gabapentin three times a day and 1 g oral capsules of valacyclovir three times a day. The patient's kidney function was normal with a creatinine level of 0.9 mg/dL, and he had a borderline decrease in his estimated glomerular filtration rate (86.7 mL/min/1.73 m²). He was not taking any opioids or other antineuropathic medications when prescribed gabapentin and valacyclovir. A shingles vaccine was also ordered for the patient after the symptoms had resolved to prevent further PHN outbreaks.

The patient's symptoms continued to worsen over the proceeding weeks, causing him difficulty sleeping and the inability to go to work for several days at a time. After

Corresponding author: Jonathan Kopel, BS, School of Medicine, Texas Tech University Health Sciences Center, 4202 16th St., Apt. 601, Lubbock, TX 79416 (e-mail: jonathan.kopel@ttuhsc.edu)

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Figure 1. Left axilla showing dermatomal rash secondary to postherpetic neuralgia.

discussing the options, the patient decided to replace gabapentin with 100 mg pregabalin (Lyrica) twice daily, which was recently approved for PHN by the Food and Drug Administration. In the following weeks, the patient noticed a significant reduction in his PHN, with a decrease in pain scale score from 10 to 5. Using Lyrica, the frequency of burning, stinging, and itching episodes went from constant to a few times a week. The patient was also able to resume normal activities and sleep without significant pain or numerous disruptions. The patient's PHN continued to improve without the need for further management, and his rash receded. However, a few blisters reappeared, leading to a few episodes of severe pain. Despite the resurgence of his PHN, the patient described the pain as less severe than his first episodes and noted that his pain was improving overall. He was subsequently prescribed 50 mg oral capsules of tramadol four times per day; his 100 mg oral capsule of Lyrica was increased from two to three times per day.

DISCUSSION

Pain management for acute and chronic conditions includes multiple agents, such as opioids and nonsteroidal anti-inflammatory drugs.³ However, opioids have many adverse side effects, and nonsteroidal anti-inflammatory drugs can potentiate gastrointestinal bleeding and renal toxicity.³ In recent years, pregabalin has become an attractive pharmacological agent for the management of chronic neuropathic pain.³ As a successor of gabapentin, pregabalin is a lipophilic gamma-amino-butyric acid analog with several neurological effects.³ Clinically, pregabalin requires less frequent dosing and is more potent, thereby reducing dose-related adverse effects and improving clinical outcomes.³ Pregabalin reduces neuropathic pain by reducing the hyperexcitability of dorsal horn neurons, allowing for reduced opioid consumption and opioid-related adverse effects.^{3–8} Given the limited therapeutic treatments for PHN, pregabalin has also been shown to be a cost-effective alternative for patients who fail to respond to

gabapentin.^{9,10} Pregabalin was previously a controlled substance in the United States because clinical studies showed that some patients experience euphoria with pregabalin.¹¹ However, pregabalin has shown increased opioid-sparing effects with a reduction in opioid-related adverse events.¹² As a result, the Food and Drug Administration recently approved multiple applications for generics of Lyrica for the management of neuropathic pain.¹³ Given its effectiveness in reducing neuropathic pain, Lyrica should be considered for patients resistant to other forms of pain management.

ORCID

Jonathan Kopel <http://orcid.org/0000-0001-5934-2695>

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