CLINICAL MANAGEMENT

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Evidence for Interventional Procedures as an Adjunct Therapy in the Treatment of Shingles Pain

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Heidi J. Shannon, BSN-BC • Graduate Nursing Student in Family Nurse Practitioner Specialization • University of North Dakota • Grand Forks, North Dakota

Julie Anderson, PhD, RN • Associate Professor • University of North Dakota • Grand Forks, North Dakota

Jayant S. Damle, MD • Anesthesiologist and Pain Management Specialist • Interventional Pain Management Department • Altru Health System • Grand Forks, North Dakota

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The authors have disclosed that the U.S. Food and Drug Administration has not approved the use of pregabalin, gabapentin, duloxetine, and intrathecal administration of methylprednisone for the treatment of shingles pain as discussed in this article. Please consult the product's labeling for approved information.

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This continuing educational activity will expire for physicians on June 30, 2013.

PURPOSE:

To enhance the learner's competence with knowledge of interventional procedures as an adjunct therapy in the treatment of shingles pain.

TARGET AUDIENCE:

This continuing education activity is intended for physicians and nurses with an interest in skin and wound care.

OBJECTIVES:

After participating in this educational activity, the participant should be better able to:

1. Demonstrate knowledge of active herpes zoster (HZ) symptoms, antiviral therapy criteria, non-interventional medication management for HZ-related symptoms, and HZ-related complications including post-herpetic neuralgia (PHN).

2. Apply knowledge of PHN interventional procedures to examples of patient care case scenarios.

ABSTRACT

Shingles (herpes zoster) is a painful manifestation of infection of the dorsal root ganglia of the spine and seen as blisters or vesicles in linear formation, usually on the upper torso. Up to one-third of those afflicted will experience complications, with the most common complication being postherpetic neuralgia (PHN). The risk of PHN increases for each decade of life after age 50 years, and the pain associated with this complication has the potential to endure for years, be unrelenting, and decrease an individual's quality of life. Treatment options, including adjunct interventional procedures, are presented to address the common complication of PHN. Although no conclusive evidence base is present for the use of any particular interventional procedure in the treatment of acute pain or refractory pain of shingles, a number of therapies have been indicated to have some level of effectiveness. Standard therapy options in the form of oral medications and topical agents should be used first. For those situations of refractory pain, a referral to an interventional pain management specialist is warranted to explore possible adjunct procedures to lessen the pain of PHN. A comprehensive care management approach, incorporating interventional pain management procedures as an adjunct therapy, will enable patients to have their pain treated as effectively as possible by utilizing appropriate methods available.

KEYWORDS: shingles, herpes zoster, postherpetic neuralgia, treatment options, interventional pain procedures

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INTRODUCTION

Shingles will continue to be a serious health condition over at least the next half-century for adults 50 years or older. Shingles is another term for the remanifestation of the dormant herpes zoster (HZ) virus residing in the dorsal root ganglia. It is triggered by a state of weakened immunity such as age older than 50, surgery, and stress. Shingles presents as a unilateral vesicular rash along the affected dermatome, typically preceded by an itching, burning, and/or sharp pain sensation a few days prior in the same area where rash/vesicles develop (prodromal phase). The vesicles typically have a red base with a cloudy appearance and can become hemorrhagic and crust over, and then these scabs fall off after about 3 weeks. Manifestations can occur anywhere from the head to the sacrum or on the limbs, with the most common location being along the thoracic dermatome.[1,2] Although individuals presenting with shingles frequently seek care in outpatient settings, the stress of hospitalization can cause a severe and debilitating disease outbreak in hospitalized patients.

Shingles is far from extinct; incidence can be expected to rise as the US baby-boomer population ages. It is estimated that 95% of the US population has been exposed to chickenpox and therefore has the potential to have a reactivation of this virus in the form of a shingles outbreak. One million people in the United States are estimated to be diagnosed with shingles every year, and up to one-third experience complications. Therefore, it is increasingly important that skin care clinicians and other providers are prepared to diagnose and manage all aspects of care for affected individuals. The most common complication is postherpetic neuralgia (PHN).[3] Postherpetic neuralgia is the painful unilateral dermatome involvement that persists after the shingles rash has healed. It is frequently associated with allodynia: a painful response to stimuli that are usually not painful.

DIFFERENTIAL DIAGNOSIS AND CONVENTIONAL TREATMENTS

The shingles pain and rash must be differentiated from other diagnoses. Pain differential diagnosis considerations include pulmonary embolism, pleuritic chest pain, herpes simplex, angina, acute myocardial infarction, pericarditis, renal colic, and prolapsed disk.[4,5] A thorough history and physical examination, including pain characteristics such as duration, location, description, and modifying factors, will aid pain differentiation particularly in the prodromal phase. Shingles pain is constant; the pain does not vary with dietary intake, breathing, or activity. Allodynia is typical; light touch can increase pain intensity, and deep pressure can feel comforting to some patients. Common patient pain descriptors range from burning and throbbing to stabbing sensations.[6] Differential diagnoses for shingles rash include acute herpes simplex, contact dermatitis, acute impetigo, folliculitis, acute scabies, insect bites, drug-induced rash, and acute varicella.[4,7,8]

The open lesions that follow the HZ rash are considered infectious until the lesions are dried because the secretions contain the varicella zoster virus and require contact isolation in the hospital setting. Those patients with the highest risk of complications, such as secondary bacterial infections, include immunocompromised patients and pregnant women.[9] General wound care guidelines, such as not scratching lesions and keeping the affected skin clean and dry, should be discussed with all patients. Instances where general wound care advice is not adhered to can result in a secondary bacterial infection of the HZ lesions. Infection symptoms may include fever, erythema, and purulent drainage. Treatment of secondary bacterial infection is usually responsive to oral antibiotics, such as erythromycin, pending final wound culture results.[10] One HZ lesion case report that was refractory to 2 antibiotic therapy courses was reviewed;

this case responded well to a nonadherent silicone absorbent dressing therapy over a 4-month period.[11]

Once the shingles diagnosis is made, an important step in the discussion of treatment options with the patient is often missed: awareness of the potential for PHN. A survey published by the American Pain Foundation found that in a group of patients surveyed about shingles, only about one-third reported being aware that shingles can lead to chronic pain lasting months to years.[12]

Before discussing pharmacologic strategies for acute HZ and PHN management, an HZ primary prevention discussion is warranted. Youth vaccination efforts are attempting to eradicate HZ through eliminating the initial varicella infection; reducing youth disease burden can potentially reduce future shingles incidence in the adult population. Adults 50 years or older should be vaccinated with the zoster vaccine regardless of previous varicella exposure to prevent initial outbreaks of shingles in this population, according to the Centers for Disease Control and Prevention's latest 2012 Immunization Schedule (http://www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm#chgs). The zoster vaccine shortage is complicating providers' recommendations for vaccination in older adults; individuals should be encouraged to be patient because it can take a few months to receive the supply. It is very important for patients to follow through with the vaccination, as treating those afflicted by shingles can be quite challenging.

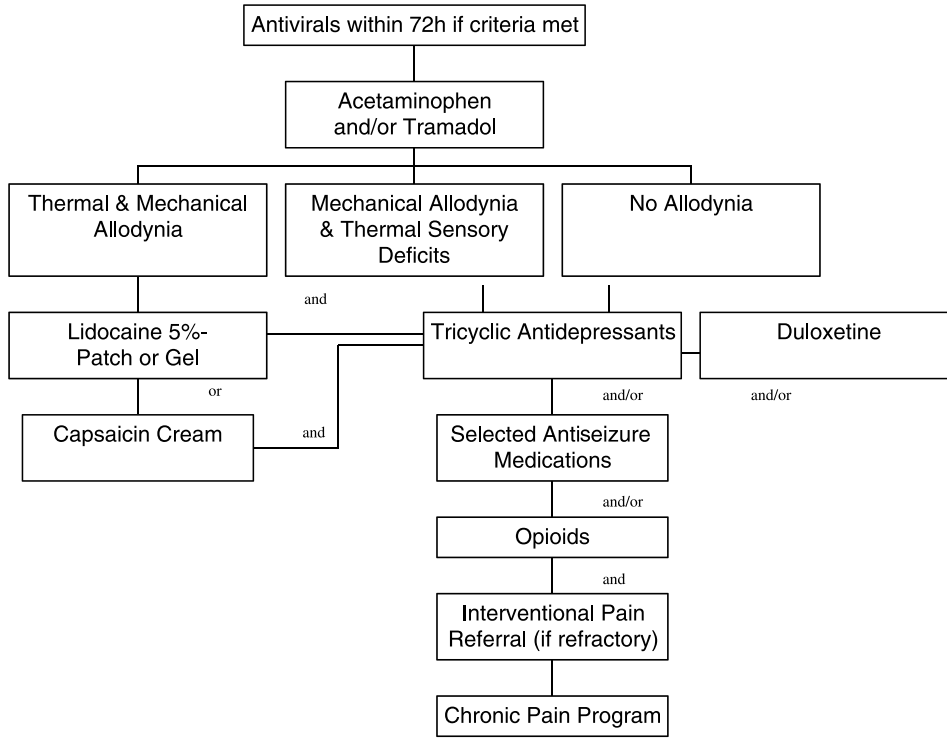
Acute HZ and PHN management is challenging because there is no rigid guideline to follow for patients with variable symptoms in a wide severity range; a general guide for acute HZ and PHN management will be discussed. The addition of medications for pain and symptom control or the use of another medication shown to be effective for HZ will be individual patient-response specific. Adverse effects or lack of benefit would justify trying an alternative or additional medication. The idea is to provide available scientific evidence for the art of HZ management. Acute HZ treatment approach includes antiviral medications and acetaminophen. Steroids could be considered in the acute phase if pain is excruciating; specific antiseizure medications have shown benefit in acute HZ and PHN. The approach for PHN management and/or patients not responding/improving to acute HZ treatment can include a lidocaine patch or gel for PHN having thermal and mechanical allodynia symptoms. If there is partial or no allodynia, consider starting with tricyclic antidepressants (TCAs) and either add or alternatively use the specific antiseizure medication (if not already started in acute HZ phase). The next drug class to add or try would be opioids. Figure 1 illustrates a graphic PHN pain management flow sheet. Each medication class will be discussed regarding supporting evidence and applicability to acute HZ and/or PHN symptom management. Ideally, oral antiviral therapy should be started within 72 hours of initial symptoms in individuals presenting with shingles who meet at least 1 of the following criteria: (1) older than 50 years, (2) greater than moderate pain, (3) greater than moderate rash, and (4) nontruncal involvement. Three antiviral treatments have been approved by the US Food and Drug Administration (FDA) for the treatment of HZ. Usual doses are acyclovir 800 mg given 5 times daily for 7 to 10 days, famciclovir 500 mg 3 times daily for 7 days, and valacyclovir 1000 mg 3 times daily for 7 days.[6,14,15] One antiviral, acyclovir, has been approved for the longest period and has the lowest generic cost of all the antiviral therapies. Because of acyclovir's high dosing frequency, famciclovir and valacyclovir are favorable for patient compliance. Herpes zoster ophthalmicus clinical outcomes research compared valacyclovir and acyclovir, finding the only significant advantage being the dosing frequency. Famciclovir and valacyclovir have shown similar profiles in pain reduction, rash healing, and adverse effect profile. Wholesale valacyclovir costs less than famciclovir.[15,16]

Patients who do not meet the criteria to receive antiviral treatment can be managed with a variety of oral pain control strategies; this may be all that is required for the majority of patients due to HZ natural history. Herpes zoster is a self-limiting condition for patients younger than 50 years; however, 10% to 20% of HZ patients older than 50 years will develop PHN.[17] Lack of pain control is the primary indicator for additional medication beyond antiviral therapy and over-the-counter pain medication.

Research has found oral corticosteroid therapy for the treatment of acute HZ and PHN prevention controversial. Several studies have concluded that corticosteroid therapy does not prevent PHN.[14,18,19] If the benefits are judged to outweigh the risks in patients with moderate to severe pain, prednisone can be used in the acute phase of HZ for potential pain reduction and subsequent improvement in quality of life.[20] Whitley et al[20] found a 3-week taper of prednisone at 60, 30, and 15 mg improved patients' quality-of-life indicators but had no effect on PHN development. One quality-of-life indicator, 100% return to usual activity, was 1.74 times (confidence interval, 1.21–2.51 times; $P < .01$) more likely in prednisone group versus control group at 1 month. One limitation in this study relates to the method used to report the results; results were reported in terms of relative risks versus duration differences of symptoms and pain. This hampers determination of clinical relevance that is further complicated by steroid therapy adverse effects. Conversely, research by Wood et al[14] does not support the use of corticosteroids because of the lack of clinical benefit; only a transient decrease in pain (6%–8%) was found on research study day 21 ($P = .05$).

Figure 1.

PAIN MANAGEMENT STRATEGIES FOR ACUTE HERPES ZOSTER IN ADULTS



Modified with permission from Panlilio et al.[13]

Topical treatments for PHN, lidocaine 5% patch or capsaicin cream, may be beneficial for some patients, particularly those with mechanical and thermal allodynia.[21,22] Topical lidocaine does not produce a blood serum level in the body; its mechanism of action is hypothesized to be related to sodium-channel blockade disrupting peripheral pain impulse generation and conduction via nociceptors directly below the application site. Capsaicin can cause an initial burning sensation and hyperalgesia that is followed by its desired mechanism of action, desensitization of the sensory nerve fibers specialized in noxious or painful sensations.[23,24] In a Medicaid cost study, lidocaine patch usage, approved for this indication in 1999, resulted in less PHN-related costs than the HZ therapy–specific antiseizure medications pregabalin and gabapentin.[25,26] Pregabalin and gabapentin are not specifically indicated for the management of PHN but for a variety of neurogenic pain. Lidocaine 5% patch was shown to reduce pain intensity by half in 40% of the 332 study participants with the recommendation of a minimum 2-week trial of medication.[27]

For clinicians seeking nonopioid pain management, TCAs, such as amitriptyline or nortriptyline, have demonstrated pain relief for PHN patients,[28] and the antidepressant duloxetine has neuropathic pain-relieving properties. Duloxetine is a serotonin norepinephrine reuptake inhibitor that restores balance in the descending inhibitory pain pathways, thus reducing hyperalgesia and allodynia, but as of yet is not FDA approved for HZ pain because of lack of research.[29] The exact mechanism of TCA pain control is not entirely clear but thought to be related to an increase in endogenous opioids via the delta-opioid receptor. The analgesic effects of TCAs are present at lower doses than its antidepressant effects, which block noradrenaline and/or serotonin uptake.[30] Amitriptyline's adverse effect profile can be more problematic for some patients. Amitriptyline adverse effects with high occurrence are orthostatic hypotension, lethargy, and drowsiness in up to 30% of patients; hypersomnia occurrence is about 80%.[31,32] However, Raja et al[33] compared TCAs with opioid therapy for PHN treatment and did not find a clinically significant

difference in pain reduction. Raja et al[33] recommended opioid therapy only for those patients who do not have an effective TCA therapy response.

The antiseizure medications gabapentin and pregabalin have shown benefit for HZ neuropathic pain through quality-of-life indicators such as improved sleep, shortened pain duration, and reduced pain intensity. Gabapentin was shown to be beneficial with acute HZ pain, even when just one 900-mg dose was given. Gabapentin's mechanism of action is not fully understood, but it does cross the blood-brain barrier and does not bind to GABA receptors.[34,35] Research documents that gabapentin dosages can be titrated up to 3600 mg in divided doses; however, many patients are unable to tolerate this dose. Typical gabapentin dosage in medical practice for HZ pain is titration up to 300 to 600 mg 3 times a day, with sedative adverse effects limiting titration in many patients; pregabalin can be titrated for symptom control up to 300 mg 3 times a day. Pregabalin was effective for PHN with a 30% to 50% reduction of pain rating baseline with dosing ranging from 150 to 600 mg daily ($P = .0001$). Pregabalin has analgesic as well as anticonvulsant properties and can reduce HZ pain through a reduction in many neurotransmitters, one of which is substance P.[36–38] Initial out-of-pocket expenses may appear to favor gabapentin; however, pregabalin was superior in 2 PHN treatment outcomes: less economic burden with increased quality-of-life years and less pain duration (9 days gained for little to no pain, 4 days less for both moderate and severe pain over 12 weeks).[39] Pregabalin has also been shown to decrease pain-related sleep disturbance after the first week of therapy.[36]

Pain control can include acetaminophen or tramadol for mild pain or an opioid analgesic for more severe acute pain. Although tramadol has been shown to be beneficial for PHN pain over placebo with a 9% pain intensity reduction, it is not recommended to be given concurrently with TCAs because of the risk of serotonin syndrome.[40] Although opioids are recommended for PHN pain by some,[41] prescribing narcotics for chronic pain can lead to questions about which patients are appropriate candidates. A validated screening instrument is an important rational decision-making component for selecting potential opioid therapy patients. The DIRE (diagnosis, intractability, risk, and efficacy) score is one screening tool that can be used to assist providers with noncancer pain patients and the assessment of whether a particular patient is appropriate for long-term opioid therapy. This score is used to predict patient compliance with therapy, which includes categories such as psychological, chemical health, reliability, and social support. The DIRE score also predicts long-term opioid analgesia efficacy.[42,43]

PAIN TREATMENT MANDATE

Regardless of whether opioid medication is used for the management of shingles pain and PHN, the need to treat the pain is real; pain is now considered the fifth vital sign. ''After-shingles pain is one of the most common causes of pain-related suicide in older Americans.''[12] The undertreatment of pain can and does have serious consequences both for the patient and healthcare provider with regulatory agency mandates to treat pain. There is a need for more to be done in the management of HZ and PHN especially because medications are not always effective; interventional pain management procedures may be one pain management area that is underutilized.

The basic concept behind using procedures to temporarily block the pain signal entails interrupting the development of some undesired somatic pain imprints on the brain. Neuronal and synaptic efferent functions are thought to be altered by persistent afferent impulses, resulting in a somatic memory. This memory can result in a decrease in pain perception (desensitization), an increased perception of pain even with progressively less intense signals (sensitization), or an increase in the area of pain perceived through a ''windup'' phenomena. Windup is thought to occur by the excitation of nearby neurons by the neurons in the primary location of pain.[44,45] The prevention of deafferentation of the dorsal root ganglia is a desired procedure outcome. Deafferentation can be described as a phenomenon where afferent impulses are no longer sent to the brain, but the brain still perceives pain at the affected location.

INTERVENTIONAL PROCEDURES

Sympathetic nervous system (SNS) blockade is the goal of many interventional procedures for HZ pain. The hypothesis is that HZ causes viral inflammation of the dorsal root ganglion that stimulates the SNS. This stimulation causes neuronal ischemia and eventual death of the large myelinated nerve fibers, sparing the small nerve fibers. Early treatment of HZ with sympathetic blocks is thought to stop the irreversible damage. Sympathetic nervous system blockade can be accomplished at different locations and with varying methods; the pain- and symptom-relieving effects, however, are short-lived, lasting a few days to a week. The number of weekly blockades varies between providers. For example, an experienced practitioner may provide up to 5 weekly blockades to break the pain cycle with the goal of stopping the irreversible nerve damage. Direct SNS blockade spares sensory and motor function; indirect SNS blockade, such as in the epidural space, can temporarily block sensory and motor function.[46] A review by Winnie and Hartwell[47] found early treatment with sympathetic blocks resulted in better HZ treatment outcomes than later

treatment initiation. Three months is considered a critical time frame by many practitioners to initiate interventional treatments for shingles pain; successful pain reduction beyond this period is known to fail dramatically. Epidural sympathetic ganglion block is an indirect SNS blockade performed by introducing a needle at the appropriate intervertebral space and advancing the needle to the epidural space. A common advancement technique is ''loss of resistance'' into the negative-pressure epidural space; proper placement is then verified by fluoroscopy. An anesthetic and steroid are injected into the epidural space, and the patient is promptly positioned with the affected side down for approximately 30 minutes, as the SNS blockade can cause hypotension, and reversal medications must be readily available. The epidural sympathetic block treatment can be used to treat HZ and chronic regional pain syndrome patients.

Stellate ganglion block is a type of SNS block. The left or right stellate ganglion is located at the base of the neck. The carotid artery must be pulled laterally to access this location. This block can be indicated for facial pain involving the trigeminal nerve. Positioning of the patient after the procedure can facilitate medication distribution to the head (patient supine) when treating trigeminal or ophthalmic HZ, or to the arm (head-of-bed elevation at 30 degrees) when treating Raynaud phenomenon. One case study was found in the past 10 years by Gomes et al[48] on this issue, and it indicated sympathetic block effectiveness for HZ pain. Gomes et al[48] reported a case of complete PHN resolution in an HIV patient with trigeminal distribution HZ after a total of 10 weekly blocks were given in 2 sets. Salvaggio et al[49] used stellate ganglion blocks for facial pain treatment in 5 patients with HZ ophthalmicus; early treatment (within 15 days of pain onset) with blocks resulted in virtually no residual pain at 6 and 12 months versus delaying stellate ganglion blocks for 6 months, resulting in 50% pain reduction at 12 months.

Intercostal nerve block is an individual nerve blockade that can be used to treat acute HZ pain. Anesthetic is administered by a needle that is ''walked off'' the inferior margin of the rib[50] at the posterior axillary line corresponding to the pain location. This anatomic location makes pneumothorax a primary risk factor. This procedure can be performed daily for acute HZ pain to facilitate deep breathing that can be limited by HZ pain. A descriptive study conducted by Chau et al[1] examined 58 case studies, 49 of which were intercostal nerve blocks. Some of the patients received blocks for the entire time they were studied, and the authors reported 80% improvement at 1 and 3 months. This study supports the short-term potential benefit of intercostal nerve blocks, but may not be realistic for patients to get injections biweekly for up to 3 months.

Paravertebral block is a type of intercostal nerve block that is performed medial to the posterior angle of the ribs; the sympathetic chain lies on either side in the paravertebral gutter. Ji et al[51] compared effectiveness of paravertebral injections versus standard therapy in China using 132 patients. They reported significant pain relief with 4 injections over 1 week at both the 1 month (13% vs 45% patients with pain or allydonia, $P < .001$) and 1-year follow-up (2% vs 16%, $P = .017$). Ji et al[51] reported that paravertebral block (PVB) and epidural analgesia provide comparable pain relief, but express a preference for PVB because of a better adverse effect profile. This was the only study found that mentioned this interventional approach for HZ treatment. Conversely, PVB injections are considered, by some experienced practitioners, much more risky than epidural blocks with the treatment of HZ.

Selective nerve root injection is a potential treatment option for HZ; this injection can be performed by various techniques. The left or right transforaminal approach will be discussed. This approach is achieved by selecting the appropriate vertebral interspace: cervical, thoracic, lumbar, or sacral one. The needle is placed at the lower superior transverse process edge, directing the needle to the appropriate pedicule; this placement will facilitate the injection of the nerve root.[52] Back pain is a common indication for this procedure at the lumbar level. Evidence for selective nerve root injections in the treatment of HZ pain is limited to case studies. Several case study reports[53–55] indicate relief from HZ pain success with cervical nerve root blocks; rare motor involvement of HZ was treated with 2 lumbar–5 selective nerve root injections, resulting in improved motor function and decreased pain. Cervical transforaminal injections can be especially risky; the potential for brain and spinal cord infarcts, even death, can deter even experienced pain practitioners from this procedure.

Radiofrequency ablation is a procedure used to burn the dorsal root ganglia and provide prolonged pain control; lumbar radicular pain is a common diagnosis that can be treated with radiofrequency. A radiofrequency lesion can be obtained by 2 methods: continuous or pulsed/intermittent. Neuropathic pain is usually a contraindication for continuous radiofrequency, but pulsed radiofrequency is being explored as a treatment for HZ pain. An epidural sympathetic ganglion blockade (see previous description) is the procedure that must precede a radiofrequency. If pain relief is achieved, this epidural sympathetic ganglion blockade will be termed a *positive diagnostic block*. A patient typically has a positive diagnostic block before radiofrequency is considered; the pain management specialist must be able to isolate the dermatome(s) affected by the HZ virus. One study was found in the past 10 years using pulsed

radiofrequency for PHN management. Kim et al[56] used pulsed radiofrequency for PHN patients (n = 49), noting a 50% pain reduction ($P = < .05$) that was maintained at 4, 8, and 12 weeks. Radiofrequency is not a permanent pain-reducing treatment; pain can and does reoccur in months to years when used for lumbar radicular pain; however, the procedure can be repeated for pain control.

Intrathecal alcohol administration is a high-risk procedure reserved as a last-resort treatment for PHN. Alcohol destroys ganglion cells when injected near the sympathetic chain and thus blocks all postganglionic fibers to all the effector organs.[57] This destruction can have untoward effects, such as paralysis and neuralgias that can take weeks to months to resolve.

Evidence for this procedure is limited to case studies. Benzon et al[58] describe a case of near-complete pain resolution using intrathecal alcohol despite PHN duration of 2 years. Intrathecal administration of methylprednisone is described as a treatment for PHN pain in a foreign research study, but is not approved by the US FDA because of the risk of arachnoiditis.[59]

Spinal cord/peripheral nerve stimulation is another last-resort treatment for PHN. This therapy involves generator implantation that activates pain inhibition in the dorsal horn via electrical current administered by leads placed on the spinal cord or peripheral nerve. The patient experiences paresthesia that decreases pain sensation; spinal cord stimulation (SCS) is considered successful if pain is reduced by 50%. Spinal cord stimulation is most commonly used for failed-back syndromes or postlaminectomy syndrome.[60] The SCS generator requires surgical battery replacement every 2 to 5 years, depending on patient usage parameters. Spinal cord stimulation has been studied as a treatment for HZ. Harke et al,[61] in a prospective study, reported that 82% of SCS patients with median pain had decrease in pain from 9 on a 10-point visual analog scale to 1, despite a history of PHN for 2 years. Through analysis of a few case studies referring to SCS for PHN treatment from the 1990s,[61] it was concluded that SCS may benefit patients with resistant PHN cases.

Sphenopalatine ganglion (SPG) block is a rarely used, last-resort treatment for HZ pain; SPG is located in the pterygopalatine fossa. This fossa is anatomically located lateral to the lateral nasal wall at the level of the middle nasal turbinate; the fossa also contains the internal maxillary artery. One administration method involves placing an anesthetic combination, such as tetracaine, adrenaline, and cocaine, via a cotton swab allowing the medication to cross the nasal mucosa to the SPG. The SPG and the trigeminal ganglion are not completely separate, allowing concurrent trigeminal blockade. This procedure can be indicated for HZ-specific pain such as atypical facial pain, trigeminal neuralgia, and HZ ophthalmicus that is refractory to other treatments.[62,63] Research support for this treatment primarily focuses on headache management; however, one case study was found in the literature that indicated the procedure was effective for reduction or relief of HZ pain.[64]

IMPLICATIONS FOR PRACTICE

Skin and wound care clinicians will continue to be faced with the management of shingles and its sequelae, including chronic pain. Chronic pain is an area that is challenging to manage for both the patient and the healthcare provider. It is complicated by the fact that providers and researchers cannot even agree on the definition of PHN (pain that persists at 30 days, 3 months, or 6 months after rash onset).[65] Not all patients are appropriate candidates for opioid management, and some cannot tolerate other medications because of adverse effects. Access to pain management treatments for HZ pain can be limited by availability of pain specialists, financial constraints, and patient transportation disparities. Some patients may choose not to have interventional procedures once the risks are known; they may choose complementary and alternative medicine as an adjunct or alternative therapy. When all else fails, an intensive chronic pain management program can help HZ patients live with the pain, as much as possible; unfortunately, because of nonpayment by insurance companies, even the chronic pain program option is not available to most patients. The challenges are great in the treatment of HZ pain; clinicians must advocate for patients in the most cost-effective and practical manner possible and yet not deny the opportunity for using more unproven techniques in the management of this painful condition.

SUMMARY

Pharmacologic management of acute HZ and PHN should continue to be first-line therapy with antiviral therapy initiated as close to 72 hours of HZ prodrome as possible in appropriate patients. The debate over corticosteroid use for HZ management continues, as it does not prevent PHN but may have use in acute HZ phase quality-of-life indicators. The natural history of HZ will result in most patients spontaneously recovering without the need for an interventional procedure; however, for the subset of patients with severe HZ pain refractory to medications, a referral to a pain management specialist should be initiated within 3 months of HZ onset. There are multiple procedures that can be used to ease the pain of shingles for those patients willing to accept the procedure risks. Pain control is mandated by regulatory agencies; the pain of HZ must be treated to the full extent.

PRACTICE POINTS

- The incidence of shingles and the sequelae of PHN is expected to increase as the US population ages.
- In the prodromal phase of shingles, a thorough history and physical examination, including pain characteristics such as duration, location, description, and modifying factors, will aid in differentiation of the pain source.
- Differential diagnosis for the shingles rash includes herpes simplex, contact dermatitis, acute impetigo, folliculitis, acute scabies, insect bites, drug-induced rash, and acute varicella.
- Patients with shingles who are at highest risk of complications, such as secondary bacterial infections, include immunocompromised patients and pregnant women.
- Youth and adult vaccination with the zoster vaccine as a HZ primary prevention strategy is hampered by a zoster vaccine shortage.
- Antiviral therapy initiation should occur in less than 72 hours following the onset of HZ symptoms in patients who meet specific criteria.
- Sympathetic nervous system blockade through interventional pain management procedures has proven helpful in PHN pain reduction/elimination.

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