

Post-Herpetic Neuralgia Pain And Laser Acupuncture

Background, diagnosis, discussion, and case report of successful management of post-herpetic neuralgia pain in an elderly patient using laser acupuncture.

By John L. Stump, Michael Allen, and Laura Oglesby



Last month I wrote about the use of therapeutic laser for acupoint stimulation (laserpuncture). In this issue, Dr. John Stump et al shares an example of using laserpuncture in clinical practice. He presents a case of post-herpetic neuralgia that he treated with laserpuncture. This article should help further the practitioner's level of understanding related to the use of therapeutic laser for acupoint stimulation.

— William Kneebone, RN, CRNA, DC
Department Head



John L. Stump

According to the American Society of Regional Anesthesia, post-herpetic is the leading cause of suicide in chronic pain patients over the age of 70 years.¹ This case study reviews the results of using a laser as a viable method to control post-herpetic neuralgia pain, known to be a difficult case to manage. This elderly man had suffered severe pain for nearly one year and had contemplated suicide. The improvement began to show dramatically after the fourth treatment. After a course of 12 treatments, he reported no further intense pain in the previously involved area. Since manageability of post-herpetic neuralgia has been considered effective only in younger patients with duration of pain less than six months, this case study may be of benefit for those treating post-herpetic neuralgia in older patients.

Herpes zoster, also known as “shingles,” is an infectious viral disease commonly encountered in clinical practice. It is usually a benign self-limiting condition but the potentially serious complications of post-herpetic neuralgia, ocular involvement, and the confusing therapeutic regimens that are often advocated, make this a complicated condition.

When typical in presentation, herpes

zoster is not difficult to diagnose (See Tables 1 and 2). Early in the course, watery vesicles appear on an erythematous base following the cutaneous distribution of one or more posterior root ganglia, usually on the trunk of the body, and spread unilaterally. A dermatomal pain, itching or paresthesias may follow this. In uncomplicated cases of herpes zoster, the skin lesions will crust and fall off with in two to three weeks.

In a certain percentage of the population, the lesions of the herpes zoster resolve but the pain persists and, in some cases, actually gets worse. The involved zone may develop severe and prolonged burning pain with occasional “fire-like” stabs of pain. This protracted pain is known as “post-herpetic neuralgia,” one of the severe chronic pain syndromes.

The significance of this condition lies in the fact that it is one of the most frequently encountered problems among pain management professionals.¹ This is especially true in the elderly, who have a higher incidence of excruciating, unrelenting pain long after the acute illness has resolved. Its intensity and duration create such a suffering that many consider suicide as a means of escaping its ravages. The overall incidence of post-herpetic neuralgia is estimated to occur

TABLE 1. HERPES ZOSTER ESSENTIALS OF DIAGNOSIS

1. Unilateral painful vesicles in a dermatomal distribution
2. Rarely, unilateral erythematous plaques without vesicles
3. Inclusion of herpes zoster in the differential diagnosis of unilateral pains
4. Multinucleated giant cells on cytological studies
5. Definitive diagnosis and differentiation from herpes simplex infection (dependent on viral culture)

TABLE 2. HERPES ZOSTER DIFFERENTIAL DIAGNOSIS

1. Zosteriform herpes simplex
2. Chickenpox and other viral exanthema
3. Contact dermatitis
4. Dermatitis herpetiformis
5. Cellulitis
6. Factitious ulcer or dermatitis



FIGURE 1. Dr. I, receiving Luminex Laser treatment for PHN.

in 18 to 35 percent of all herpes zoster victims but may rise to more than 50 percent among elderly patients.^{2,3}

While the severity of the pain should be considered in the definition of post-herpetic neuralgia, duration of the pain is often the only defining criteria. Some authors consider pain persisting more than four weeks after the resolution of the lesions to be diagnostic of post-herpetic neuralgia. Others have considered the minimum duration to be 2,3,6, 12, or 24 months.⁴

Our clinic has managed over one hundred cases since our initial 1994 study and investigation of post-herpetic neuralgia.⁵ However, the last twenty-five cases over the past three years have been treated differently. Up until that time, electro-acupuncture was viewed as the most efficient and viable method in relieving a patient's pain due to post-herpetic neuralgia. Within the past three years, we have changed our protocol to include laser treatment. In 2003, we began using a Luminex 500 laser. At that time we were not convinced of its effectiveness as compared to the electro-acupuncture which had been used in our clinics for over 25 years. We did a clinical study to investigate its effectiveness in our most persistent chronic pain⁶ cases and, in 2006, the results were published in the *Journal of the American Academy of Medical Acupuncture*.⁷

Case Report

Dr. I, an 89-year-old male and former practicing physician was referred for evaluation and treatment of pain from post-herpetic neuralgia—for which he had received medical diagnoses and treatment over one year with no success. He was Caucasian, not over-weight, and had

several outstanding complications at the time: active heart trouble, impaired hearing, and a pacemaker. The lesions were distributed on his left side at the thoracic level of T6-7-8 and going around to the sternum. They had cleared up in the usual two to three week period following appearance of the lesions, medical care, and beginning prescribed medications (acyclovir and zovirax).

However, the pain associated with the original lesions never subsided. It had begun with a continual ache, burning, and superficial pain that progressed in severity over the following months in the same dermatomal distribution, T6-7-8. For this complaint he had receive several pain medications—neurontin and hydrocodone—in addition to the original medications. Under medical care, his condition did not improve after one year from the onset of herpes zoster. Due to his heart condition and age more aggressive treatment was not considered. His medical doctor now agreed to try our conservative alternative treatment.

At the time he was first seen in our clinic, the pain was constant and extremely severe, described as ‘11’ on a 10-point scale of intensity. The patient could not be touched in the area, could not sleep regularly, and was heavily medicated for pain reduction. No formal assessment of the patient's chronic pain had been made since the beginning of medical care.

Upon examination, the patient's posture was slightly kyphotic and away from the painful left side. He had a continuous aching and burning and superficial pain associated with hyperpathia and dysesthesia. This was dramatically increased by light touch to the area. There was a feeling of constriction or tightness along the affected area associated with itching and a feeling of formication. Episodic pains shooting out in a radicular pattern corresponding to the affected dermatome accompanied these symptoms. There was no definite daily pattern, but symptoms did seem to worsen at night.

Examination of the integument revealed a number of hyperpigmented areas of scarring on the upper back and rib cage around to the sternum with a decreased sensation to pinprick, but painful to light touch. Heavy pressure did not increase pain. Movement of the trunk, as in left and right lateral flexion and rotation, increased the pain and the

patient had rigid spinal musculature.

Up until the episode of herpes zoster, his heart was the main concern for the past two or three years. Neurological examination of the cranial nerves and extremities were unremarkable with the exception of his hearing loss. Ophthalmic involvement was not noted on examination.

Pulse: Slow, wiry, rolling, especially at the bladder, liver, and heart positions.

Tongue: Bright red tip, thin, cracked and thin white coating across the back.

Materials and Methods

Treatment consisted of an introduction of acupuncture for the first five treatments to get the meridian flow and balance as well as possible. Although there are conditions for which manipulation and electrical stimulation are beneficial in clearing meridians, none were used.

Kingli (China) disposable needles with tube inserters were used. The needles were inserted into the skin at a depth of approximately 3mm. Needle manipulation was a light, reducing method for a duration of one to three seconds or until the arrival of Qi (de qi; a term used in acupuncture to describe the sensation upon successful needle manipulation) was detected. The patient was needled at six acupoints on the lesion side for the first four treatments; thereafter, the laser was used in place of the needle at the same locations (see Figure 1). The so-called acupuncture ‘Bladder Points’ were used bilaterally throughout the treatment schedule,⁸ as follows:

<u>Acupuncture Point</u>	<u>Name</u>
BL 15	Heart Shu
BL 16	Governor Shu
BL 17	Diaphragm Shu
BL 18	Ganshu
LV 14	Cycle Gate
SP 21	Great Luo

Needles were retained for 20 minutes from the time the last needle was inserted until the first needle was ready to be removed. The laser treatment was 50 seconds per acupoint for two rounds.

Treatments were given two times per week for four weeks, reduced to one treatment per week for three weeks and one treatment for the month following the last two-week session, for a total of twelve treatments. Before each treatment, Dr. I was asked to rate his pain according to a 10-point scale (see Table 3) adapted from the McGill Pain Questionnaire.⁹

TABLE 3. PAIN EVALUATION CRITERIA*

0-1	No pain
1-2	Little pain
2-3	Mild pain
3-4	Moderate pain
5-6	Bad pain
6-7	Excruciating pain
8-10	Severe pain

*After McGill Pain Questionnaire

Results

The patient’s evaluation of his pain according to the pain questionnaire criteria is shown in Figure 2. Initially, he rated his pain a 10-plus. The positive results began to show dramatically in his personal attitude after the third week: he became more talkative and even brought his grandson, who was a fourth year medical student, to a session. He began to wear normal shirts and was able to initiate a smile. After the seventh treatment, the patient reported he could sleep through the night for the first time in nearly a year. His granddaughter, who usually brought him for his visits, also began to notice the progress after the seventh treatment because he could now lie on his back for the first time.

The thoracic myospasm resolved completely and the previously painful trunk movements abated. He exhibited a pain-free, full range of motion of the thoracolumbar spine after the eleventh treatment. In his fifth week, he reported significant improvement and stated, “He could live with this pain.” Hyperpigmentation and scarring had decreased and were resolving.

It was recommended he return in one month for follow-up to both his physician and our office, which he did. Our office received a report from his physician that the condition had resolved while under conservative care. At the six month follow-up, the patient had remained at a 1-2 pain level but readily admitted he had been that bad or worse before the post-herpetic neuralgia due to degenerative arthritis of the spine. He has not reported for his one-year examination as of yet.

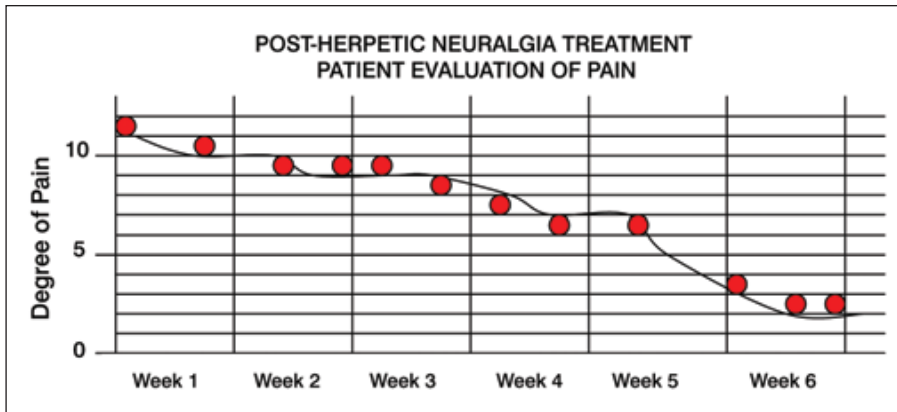


FIGURE 2. Patient evaluation of pain during treatment for post-herpetic neuralgia.

Discussion

In the “language” of traditional Chinese medicine, herpes zoster is caused by external ‘Dampness and Heat’, or by ‘Liver Fire’ in combination with a ‘Weak Spleen.’ The Damp Heat then blocks the Meridians and Collaterals. Herpes zoster is considered a Yang excess, namely excess of Damp Liver Heat, and in this case, blocking the Bladder Meridian in the noted areas.

Treatment of symptoms from a western diagnosis and perspective of post-herpetic neuralgia is accomplished by laser acupuncture at specified points. Traditional Chinese medicine provides a roadmap for treating the appropriate meridians—in this case, acupuncture of the the Liver, Spleen and Bladder meridians to disperse Liver Qi and reduce Liver fire; and to decrease and clear Spleen meridian Dampness.

Our aim is to always tackle the disturbance at its origin. Obviously, if the patient is in great pain, as in the case of Dr. I, symptomatic intervention is justified to alleviate the pain first (Liver Fire), or at least quell the fire as much as possible.

The dictum in Oriental medicine “drain for pain” clearly had to be applied for Dr. I in this case. Pain is a clear indicator of an excess activity, or an accumulation of excess activity, or excess energy at the pain site. This situation required that excess energy be drained away from where it was manifesting.

Pain is not a simple, straightforward, sensory experience. The definition of pain put forward by the International Association for the Study of Pain (1980) is “that it is an unpleasant sensory and emotional experience associated with actual or potential tissue damage, or described in terms of such damage.”¹⁰

Therefore, it follows that the intensity

with which the pain is felt varies from person to person and, with regard to this, a distinction must be made between an individual’s pain threshold tolerances. This does, and will, become a challenge for each of us when treating our patients. It is for this reason that this case is important for others to consider.

In the pharmaceutical world of Western medicine there is no consistently reliable, preventive therapy or definitive treatment for permanent pain relief of established post-herpetic neuralgia. In fact, much debate exists in the literature over the optimal therapy, controlled, double blind design, and follow-up. There are, however, numerous studies that strongly suggest that the best treatment for post-herpetic neuralgia is early, aggressive treatment of acute herpes zoster infection.^{1,5,6} The primary goal of treating post-herpetic neuralgia should be to afford the patient as much pain relief as possible, as soon as possible, regardless of Eastern or Western philosophy.

As indicated by Dung (1987), in his work at the University of Texas Health Science Center, there is little scientific theory currently available to adequately explain—in western scientific nomenclature—how or why acupuncture can effect a relief of the pain in post-herpetic neuralgia. Yet, continual empirical observation and clinical data indicates there is strong evidence that acupuncture can be beneficial and effective for managing post-herpetic neuralgia.^{2,6,11}

Our experience with Dr. I’s case does not support, as others have, the view that only younger patient’s respond effectively to conservative intervention of post-herpetic neuralgia.^{2,12} This case study also suggests that the treatment of post-herpetic neuralgia may be more effective

by using the laser. That was the only change made in our procedure and protocol in the last 25 years and over one hundred cases of herpes zoster and post-herpetic neuralgia. This change has clearly improved the results of treatment, especially for the elderly patient. It suggests that the elderly may benefit on several fronts with the addition of the laser. There are no contraindications for use with the laser and so it is of great value for those that cannot tolerate touch due to the intensity of pain.

Conclusion

Post-herpetic neuralgia is a severe, poorly understood syndrome that primarily affects elderly and debilitated individuals. Treatment of the well-established syndrome is extremely difficult and only minimally successful medically. The most effective treatment for this problem appears to be early aggressive treatment of the acute herpes zoster infection. However, until we understand more about the pathophysiology of post-herpetic neuralgia, aggressive acupuncture methods including laser intervention at an early stage is indicated.

Ideally, prevention is the key to eradicating this most severe of chronic pain syndromes. However, in the absence of an efficacious medical treatment, it would seem preferable to utilize these advanced conservative methods than to condemn the patient to a life of pain, misery and suffering by ignoring the possible benefits of an intervention that is inexpensive, easy to apply, well tolerated, and free of side effects. ■

*John L. Stump, DC, PhD, EdD is a Chiropractor who specialized in Acupuncture and Sports Medicine for 30 years. A graduate of the University of Maryland and Palmer College of Chiropractic, he went on to specialize in Oriental Medicine under the tutelage of Dr. Shingo Fukimbara of Kobe, Japan. This led his study to Oriental Philosophy and Scientific Methods at Shaanxi University, China, leading to a PhD. After serving as a team doctor at the '86 Asian Games and the '88 Olympics he returned to the United States Sports Academy to complete his EdD. He has been the author or contributing author of five textbooks—the latest, *Electroacupuncture*, was published by Elsevier in 2007. He authored *A Stroke of Midnight*—published by Alternative Concepts publishing in 2007; www.alternative-concepts.com. Dr. Stump is presently the Clinic Director and Consultant at the Integrative Medicine Centre, in Fairhope, Ala.*

Michael R. Allen, DOM is an Acupuncturist and Herbal Medicine Specialist. A graduate of the University of Tennessee at Knoxville he went on to do graduate studies at New College in San Francisco. His interest in Herbal Medicine took him to Japan, China, and South America. He returned to the United States and completed doctoral studies in Oriental Medicine at Southwest College of Acupuncture in New Mexico. After his internship in New Mexico he went to work in 2006 at the Integrative Medicine Centre in Fairhope, Ala.

Laura K. Oglesby, DOM is an Acupuncturist and Women's Natural Health Specialist. She is a graduate of Kansas State University with a BS in Human Biology. While investigating a career in Medicine she came across the philosophy of Oriental Medicine that capti-

vated her interest. She studied specialized techniques in Oriental Medicine and Acupuncture in China, where she did a rotation of several months. She graduated from Southwest College of Acupuncture in 2006. She went to work at the Integrative Medicine Centre in Fairhope, Ala. Dr. Laura also teaches Human Anatomy and other alternative care subjects at Blue Cliff College in Mobile, Ala.

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