

Integrative Approach to the Treatment of Postherpetic Neuralgia: A Case Series

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Abstract

Objective: To determine if the addition of alternative therapy to conventional medicine enhances the treatment of pain in postherpetic neuralgia (PHN). **Methodology:** A review of literature from 1988-1998 was conducted on the MEDLINE database, searching for information on the current treatment of PHN. The literature review found that although many medications have been used to reduce the pain of PHN, no treatments have been completely successful in decreasing pain. Data on pain reduction in PHN following treatment with a multifaceted alternative therapy combined with conventional treatment were compiled from a group of patients in the principal investigator's family medicine practice. **Results:** The alternative therapy employed in this study, combined with selected medications, showed an average pain reduction of 72.1 percent. There was a 77-percent average pain reduction in patients with herpes zoster (HZ) onset of more than one year and a 68-percent reduction in patients with HZ onset between one month and one year. Almost two-thirds of the 56 PHN patients reported pain reductions of between 75 and 100 percent. **Conclusion:** These preliminary data suggest the combination of alternative therapy and selected conventional medications provides good pain relief for most patients presenting with PHN. Randomized trials with appropriate control groups are needed to validate the effectiveness of this therapy in the treatment of PHN.

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Introduction

Herpes zoster is a painful vesicular skin disease caused by reactivation of latent *Vari-cella zoster* virus in dorsal root ganglia¹. The rash is accompanied by pain along the affected dermatome due to viral invasion of epidermis and stimulation of local pain receptors. The persistence of pain more than a month after the onset of the eruption is termed postherpetic neuralgia (PHN).² Unresolved pain has been associated with mood changes, sleep disruption, social withdrawal and depression.^{3,4} In industrialized countries, there is an estimated 15-20 percent chance of an individual suffering from HZ during his/her lifetime.⁵ The incidence of PHN increases with age, with 50 percent of herpes patients older than 60 years, and 75 percent of those older than 70 years, experiencing PHN.⁶ For 85 percent of patients below the age of 40, pain associated with HZ subsides as the rash resolves.

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Current treatment of the disease is not completely satisfactory, and many patients suffering from PHN must deal with pain for months or even years after the initial lesions have disappeared. Antiviral agents such as acyclovir and famciclovir are associated with absence or reduced duration of PHN if they are started within 72 hours of appearance of the lesions. However, many patients are not diagnosed within this period.⁷⁻⁹ In addition, some acyclovir studies show no improvement in PHN even if started within the 72 hour period.¹⁰ Other treatments such as narcotics, antidepressants, and antiepileptics offer symptomatic control in some patients, but the pain control is frequently inadequate and side effects, such as dizziness, drowsiness, and constipation, limit their use.¹¹⁻¹⁵ The limited efficacy of current treatments prompted a search for alternative approaches.

This case series describes the combination of several established techniques which have proven beneficial for the treatment of other conditions, and which also may work to relieve the symptoms of PHN. These techniques include acupuncture, local anesthetic nerve block, cupping and bleeding, meditation, and Chinese herbs. In recent years, research has begun to uncover the physiological mechanisms by which Traditional Chinese Medicine (TCM) and related treatments may work. Studies of acupuncture and electroacupuncture (EA) suggest they may be helpful in treating PHN. Acupuncture has demonstrated effectiveness in treating general muscle pain, low back pain, carpal tunnel syndrome, headache, and nausea in early pregnancy.¹⁶ It stimulates peripheral nerves and causes the release of endorphins and monoamines which block pain. Acupuncture provides autonomic nervous system modulation and stimulates neurotransmitters and ACTH.^{17,18} In addition to its analgesic effect, acupuncture also has been shown to promote healing of the skin. Needle injury in acupuncture disrupts cell membranes and generates long-lasting currents involved in repair

and regeneration.¹⁹ EA studies suggest that it stimulates the organized healing of burned skin and the healing of chronic skin ulcers.^{20,21} Some reports indicate acupuncture and EA may be helpful in the management of herpes-related pain.²²⁻²⁴

Cupping has a long history in the West for the treatment of bronchopneumonia and acute myelitis.²⁵ Applied to the skin, cupping stimulates a homeostatic response and circulation to the specific dermatome.^{26,27} Bleeding stimulates healing by delivering myriad growth factors, including the platelet-derived growth factor (PDGF).²⁸ PDGF attracts cells and is the primary mitogen responsible for cell proliferation. Body cells are normally exposed to the plasma filtrate and are only exposed to PDGF when there is injury present.

Meditation has been linked to stress reduction²⁹ and more recently shown to be useful in reducing exercise-induced myocardial ischemia in patients with coronary artery disease.³⁰ Meditation induces a deep, restful state, and helps to balance the autonomic nervous system.^{29,30} Stress and negative thoughts have been considered to be major factors in dermatologic conditions.³¹ Meditation was shown to reduce chronic pain, mood disturbance, anxiety, and depression — symptoms commonly associated with PHN.³²

Chinese herbs are widely used to treat myriad ailments and may serve as an adjunct to restore health.^{33,34} The herbs were used with the aim of restoring systemic health to speed healing and not necessarily to treat PHN directly. Herbs are prescribed on an individualized basis according to TCM symptomology, rather than using a standardized prescription. One study, examining the use of individualized versus standardized herb prescription in the treatment of irritable bowel syndrome, showed individualized herb prescriptions were more effective than standardized prescriptions.³⁵

Table 1: Patient Characteristics and Results Categorized According to Time of Onset of Herpes

	1 month to 1 year onset before treatment		Greater than 1 year onset before treatment		total	
n	31		25		56	
% male	48%		63%		55%	
% female	52%		36%		45%	
	average median		average median		average median	
age	71.2	73.5	74.5	75.5	72.7	75.0
onset of HZ (mths ago)	4	4	40.6	24	20.4	8
% pain reduction	68%	78%	77%	90%	72%	80%
pain before therapy	7.24	8	7.34	7	7.29	7
pain after therapy	2.27	2	1.65	1	2	1
number of treatments	11.7	10	13.5	11	12.5	10

Case Series

The case series consisted of 56 patients with PHN (55% male, 45% female) who attended the principal investigator’s medical practice from January 1997 to November 1997. The group was predominantly 65 years of age or older (average 72.7 years) (Table 1). Their average time from onset of HZ was 20.4 months (median, eight years). All patients were treated daily (minimum 3 sessions, maximum 34, average 12.5). Patients were excluded from the case series if they had cancer or immunosuppressive illnesses such as HIV. Those taking high doses of narcotics (greater than 120 mg codeine/day) or Prednisone were also excluded. Treatment continued until the patient no longer had pain, the improvement reached a plateau, or the patient decided to discontinue treatment. Data from all three groups of patients were included in the analysis.

Patients received the following treatment modalities at each session:

1. Acupuncture – Sterile acupuncture needles were inserted into the meridians corresponding to the dermatomes affected in

accordance with TCM methodology. Acupoints were individualized according to TCM symptomology (e.g., dryness, heat) and location of pain. Thus, it is not feasible to list all the acupoints used for various combinations of symptomology and locations. Table 2 gives examples of sets of acupoints that might have been used for certain locations within each general body area. The needle lengths were chosen according to the depth of the muscles in the involved area. Needles were removed after approximately 10 minutes.

2. Local anesthetic infiltration and nerve block (German Neural Therapy) — 1% procaine was used to infiltrate the nerve root on the affected dermatome. This allowed for painless cupping in the region and helped facilitate long term healing.^{36,37}

3. Cupping and bleeding – The skin was pricked with a sterile needle to create bleeding along a dermatome, focusing on the most painful areas and at the anterior and posterior midline of the dermatome. A cup with vacuum suction was placed over the bleeding site, stimulating a homeostatic response and circulation to the specific dermatome.^{26,27}

Table 2: Examples of Sets of Acupuncture Points for Certain Affected Dermatomes within each General Body Area (not comprehensive)

Dermatome Location	Points:code	Chinese name
Trunk	LR3 GB34 ST36	Taichong Yanglingquan Zusanli
Shoulder & upper arm	PC6 TE5 LI4 LI11	Neiguan Waiguan Hegu Quchi
Head	ST36 LI4	Zusanli Hegu

- Forty-three percent of the patients reported greater than 90-percent reduction in pain at the conclusion of therapy.

- More than two-thirds of the patients reported that their pain had decreased by more than 70 percent at the end of treatment.

- Fourteen percent of the patients reported pain reductions of less than 25 percent.

- Almost half of the patients presented with a pain rating greater than 7.5 but, after treatment,

only 5 percent of patients had a pain rating greater than 7.5 (Figure 1).

- Patients with onset of HZ greater than one year had an average of 77-percent pain reduction

- Compared with an average of 68 percent for those with onset of less than one year (Table 1).

There were no significant side-effects reported during the course of treatment.

Discussion

Most of the 56 patients in this case series improved dramatically while receiving combined therapy, using techniques accessible to any physician. The chief limitation to this or any case series is lack of a control group, either matched or randomly selected. While the pain ratings were subjective and not standardized from patient to patient, it seems unlikely that systematic positive bias in almost all the patients could have occurred. Given that all patients met or exceeded the criteria for PHN, i.e., pain more than one month after HZ onset, the speed and degree of improvement seen is unlikely to be due to natural amelioration or other factors. The fact that patients with

4. Meditation - Meditation was taught through a take-home tape and practiced at home twice daily for 20 minutes. Compliance was encouraged but not measured.

5. Chinese herbs - Given orally, single herbs, as well as patented Chinese herbal formulas, were given on an individualized basis according to TCM symptomology and pulse and tongue diagnosis. A few of the symptoms and formulas used include irritability (Long Dan Xie Gan Wan), lethargy (Jin Gui Shen Qi), dryness (Zhi Bai Di Huang Wan), and depression (Xiao Yao Wan). Table 3 lists these formulas, their constituents, and their dosages. The herbs were taken daily for the duration of the acupuncture treatments.

Subjective pain ratings on a scale of 0 to 10 (where 0 was no pain and 10 unbearable pain) were taken at the beginning of each visit before treatment. The results were as follows:

- For all patients, the average reduction in pain was 72.1 percent.

- Their average pain rating before therapy was 7.29 and after therapy it was 2.0.

HZ onset of more than one year had greater average pain reduction than those with onset of less than one year suggests the treatment and not spontaneous remission was responsible for their improvement. Although the improvement could have been due to a placebo effect, the consistency and magnitude of improvement suggests a therapeutic effect. In addition, patients with onset of more than one year had greater average initial pain rating and lower after-therapy pain rating than the patients with onset of less than one year. Some patients discontinued therapy after a few treatments did not provide them with significant improvement; all dropouts were included in

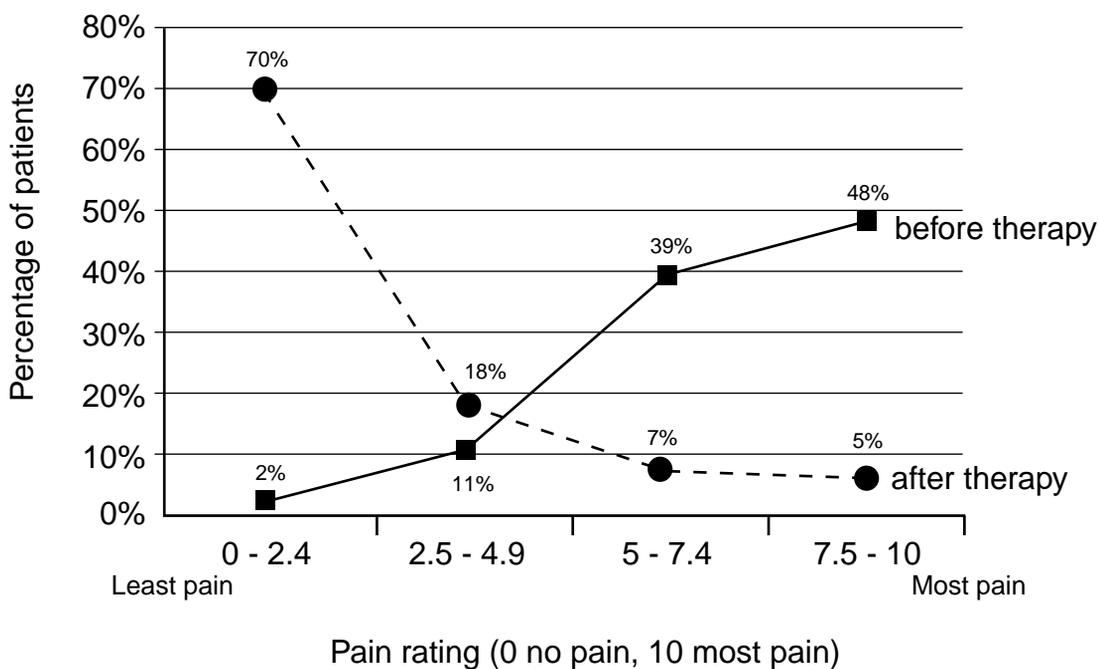
the analysis.

Further research should be conducted to determine whether this combination of treatment is effective in the treatment of PHN. The principal investigator is now conducting a randomized controlled trial which should provide evidence as to whether or not this treatment regime is a useful therapeutic option in the management of PHN. If a randomized trial proves this constellation of treatments is successful, additional trials would be necessary to identify the most active components of the combined therapy.

Table 3: Chinese Formulas Used; Composition and Dosage

Formula	Long Dan Xie Gan Wan	%	Xiao Yao Wan	%	Zhi Bai Di Huang Wan	%	Jin Gui Shen Qi Wan	%
Ingredients	Radix Bupleuri	14.3	Poria	16.9	Processed Radix Rehmanniae	27.3	Radix Rehmanniae	30
	Radix Gentianae	14.3	Radix Angelicae Sinensis	16.9	Fructus Corni	13.8	Fructus Corni	15
	Radix Rehmanniae	14.3	Radix Bupleuri	16.9	Rhizoma Dioscoreae	13.8	Rhizoma Dioscoreae	15
	Rhizoma Alismatis	14.3	Radix Paeoniae Alba	16.9	Cortex Moutan	10.3	Cortex Moutan Radisis	11
	Caulis Clematidis Armandii	7.14	Rhizoma Atractylodis Macrocephalae	16.9	Poria	10.3	Poria	11
	Fructus Gardeniae	7.14	Radix Glycyrrhizae	13.3	Rhizoma Alismatis	10.3	Rhizoma Alismatis	11
	Radix Angelicae Sinensis	7.14	Herba Menthae	2.3	Cortex Phellodendri	7.0	Cortex Cinnamomi	3.5
	Radix Glycyrrhizae Preparata	7.14			Rhizoma Anemarrhenae	7.0	Radix Aconiti Preparata	3.5
	Radix Scutellariae	7.14						
	Semen Plantaginis	7.14						
Dosage	10 pills 3 times daily		8 pills 3 times daily		8 pills 3 times daily		8 pills 3 times daily	

Figure 1: Percentage of Patients with Various Pain Ratings at Beginning and End of Therapy



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