

Easing the pain: Patients with Complex Regional Pain Syndrome report relief with VAHT®

by Sarajane Williams

"Betty's" right hand began to throb and burn within a few hours after it was struck by an airbag that deployed when her car was totaled by another driver. The 39-year-old bank teller also sustained a whiplash injury and suffered from Post-traumatic Stress Disorder as a result of the accident. Three years later, she still suffers from an overly-sensitive, cramped right hand that continually burns, periodically swells and goes through extreme temperature changes. She also suffers from sleep deprivation due to her constant pain. Exhausted, she struggles to keep her job and has learned to dispense money and write with her left hand.

"Sue" developed burning pain in her right foot after injuring her ankle when she was 49. One year later, during her first visit for pain management, she described how the pain and weakness had spread to her neck level and how she had been bed ridden for several months. Her pain had recently triggered seizures and she was in a debilitated state, socially withdrawn, and used a cane (with a folding seat) to walk. Prior to the injury, this minister's wife had been a very insightful, energetic and creative lady.

"Jim," a 46-year-old building contractor, sustained multiple injuries after being struck on the head and thrust over a wall by a large ladder that fell on him at his worksite. He was primarily being treated for Post-concussion Syndrome, left thumb and wrist pain, neck, back and right knee pain, balance problems and headaches when excruciating burning pain began in his left wrist. He eventually lost all function of his swollen left hand, had short-term memory loss, severe sleep disturbances and developed autonomic dysreflexia. Formerly the breadwinner for his family, Jim was now in a wheelchair and totally dependent on his wife and teenage daughter.

What is the common thread of this story? These three adults, in the prime of their lives, all developed Complex Regional Pain Syndrome - Type I (CRPS-I), also commonly referred to as Reflex Sympathetic Dystrophy (RSD). It is characterized by disabling, chronic and intense, burning pain, hypersensitivity to touch and some types of vibration, muscle spasms and atrophy, joint tenderness and contracture, osteoporosis and sympathetic nervous system changes that can trigger swelling, temperature, skin texture and color changes, poor circulation, and abnormal perspiration. Lymphedema, abnormal hair and nail growth can also occur. Symptoms are usually exacerbated by movement and emotional stress and can also be affected by weather changes. Sometimes sufferers also become depressed or anxious and develop headaches, brain fog, sleep disturbance and other symptoms, common in fibromyalgia.

CRPS-Type II (formerly known as Causalgia) occurs following a peripheral nerve injury (i.e. an electrical burn) in contrast to Type I, which is defined as having an "absence of known nerve injury." Type I diagnoses are usually triggered by crush injuries and traumatic bone fractures, surgeries or repetitive motion. CRPS-I can be also be caused by infection and diseases like diabetes, by chemical burns, surgery, drugs, extreme stress and in some cases there is no definable cause.

Approximately seven million cases of CRPS-I are reported annually in the U.S., and 75 percent of those sufferers are women. It can affect people of all ages, however the majority of cases occur in persons who are over 30. Some studies suggest that maternally inherited genetic factors can predispose children towards the development of CRPS-I.¹

The symptoms of CRPS generally worsen in stages if the patient is not treated early or adequately. Physical therapy is essential to provide moderate exercise, to gradually increase stress loads, to maintain joint flexibility and to prevent contractures. Occupational therapy and cognitive-behavioral therapy are also very helpful in helping the patient to develop appropriate coping strategies. Physicians usually offer regional sympathetic nerve blocks, tricyclic antidepressants, corticosteroids, anticonvulsants, non-steroidal anti-inflammatory drugs (NSAIDs), opiates and other pain medications to help patients deal with the chronic pain. Other treatments include: acupuncture, warm Epsom salt soaks, cold laser therapy, TENS units, implanted spinal cord stimulators, hyperbaric chambers, medical marijuana, mirror therapy, shockwave therapy

surgical approaches, including sympathectomy and intramuscular botulinum toxin injections (BtxA).

In CRPS-I, the sympathetic, somatosensory and somatomotor nerve pathways are involved. Studies utilizing fMRI have shown that there are significant changes in the way information in the cerebral cortex is organized and mapped.² Also, Magnetoencephalography (MEG) evaluations of patients with CRPS-I have revealed concentrated, low-frequency, delta and theta brainwave activity over the somatosensory region, in which the pain was localized, as well as in the orbito-fronto-temporal region of the cortex. It has been theorized that internally generated, low-frequency oscillations and altered rhythmic entrainment disrupt the normal flow of information between the thalamus and the cortex, which usually occurs around 40 Hz. A continuous burst of frequencies below 5 Hz is believed to contribute to chronic pain conditions.³

The concept of altered rhythmic entrainment may provide a novel theoretical model to explain why Vibroacoustic Harp Therapy® (VAHT) seems to provide relief in patients with CRPS-I. The use of rhythmic entrainment through whole body vibration, at a higher amplitude and frequency, might override 'normal' sensory input, thereby establishing a new flow of information between the thalamus and the cortex. The following case studies demonstrate how VAHT has provided relief for several clients.

Betty intermittently received VAHT during her psychotherapy visits. Her first VAHT session enabled her to relax and become comfortable, although her right hand pain was unchanged. She also had a 'vision' of her deceased father during the VAHT session, which symbolized safety and protection for her. Several weeks later, her second 15-minute session decreased her overall tension and pain slightly. Her right hand pain decreased from 8 to 7 on a 1-9 subjective rating scale. Weeks later, a third session allowed her to relax, with a slight decrease in right hand pain and significant improvement in mood. During 15-minute session four, Betty experienced significant reduction in pain and was able to relax and rest. Her right hand decreased from 8 to 5 and mood improved from 7 to 4. Suc-

See **Easing**, page 15

Easing, from page 9

cessive sessions produced similar results.

Sue received the following sessions:

1: We cautiously tried a brief trial of VAHT. The sound "cooled" her burning right foot from 9 to 8 and increased relaxation. By the end of the session, her right foot began to feel hot to the knee again, so we stopped, but her chest had "opened up" considerably and the effects lasted for four to five hours.

2: She felt more relaxed and energized after the session. Her foot had a "warm

tingle" and she was amazed — she couldn't remember the last time that her foot didn't burn. She also noticed that her attitude was improving between sessions, and she was increasing her social interaction.

3: Fifteen minutes of VAHT produced immediate relief of arm pain and a significant decrease in foot pain (7 to 2). She felt nurtured and had positive imagery.

4: Pain reduction in her foot (7 to 2), hands and arms (7 to 3) was noted post VAHT session. The spinal and skull vibration that she felt from an Irish piece with very full bass chords, *My Thousand Times Beloved*, opened "everything." She also reported that her neurologist said that her brain MRIs, taken a month earlier, showed great improvement and regeneration compared to her MRIs from one year earlier, which had shown brain atrophy and shrinkage.

5: (Two months after her first visit): The burning in her right foot was gone. She wore high heels and balanced herself on that foot! During the VAHT session, spinal vibration increased her energy. Burning in hands and arms decreased from 7 to 3. After this session, family stress and emotional upheaval exacerbated symptoms.

See Easing, page 18

Easing, from page 15

6: She reported decreased right foot (6 to 4) and arm pain (7 to 4), and positive images after the VAHT session. She felt that despite recovering from the flu, she was processing her emotional journey and learning from it.

7: Stress, cold weather and lack of hot tub therapy were "wearing her down." Decreased pain in feet (8 to 5) and hands (8 to 7) were reported post VAHT session.

Jim said that VAHT provided the greatest relief out of all of the therapies that he received. He often would arrive for a session exhausted, sleep-deprived and in a negative mood, but would usually immediately fall asleep once the VAHT portion of his psychotherapy session began and would awake at the end of the session in a more peaceful mood. He generally could not tolerate direct vibration on the left wrist but on one occasion it did provide some relief. While receiving VAHT he consistently noted pain and anxiety reduction, improved sleep, and improved mood. The effects of his VAHT sessions often lasted for several days and he noted that sleep disturbance and anxiety were "worse" when he missed his weekly VAHT sessions.

A fourth patient, "Laura," developed RSD after a left ankle injury. Her left foot turned from cold, dusky blue to pink after receiving 30 minutes of VAHT and her left foot pain decreased from 6 to 3. During the session, she saw an image of people's feet and then she saw a lock on her left ankle open up, and also saw blue colors. The next VAHT session produced similar results. Her left, blue foot turned pink after VAHT and pain decreased from 7 to 4.

VAHT Practitioner Lisa Peffley of Harleysville, Pa., has been providing VAHT for the past six months for a woman who developed CRPS-I "throughout her entire body" after having breast surgery. Lisa noted that "Julie" initially tried a VAHT session because she was in a hopeless, helpless state, and was desperately looking for anything that could provide relief. Julie had been relying on a morphine pump for pain management, however drowsiness was a major side effect that negatively affected her quality of life. During her first session she fell asleep very soundly and was difficult to wake up. After the session, Julie was amazed at how much better she felt and scheduled another appointment for a month later. During that following visit, she reported that she had experienced several days with little to no pain after the previous VAHT session. After several more VAHT sessions, she visited her doctor and asked for her morphine to be reduced so she could function "normally." She is now able to drive herself to her own treatments and has weaned herself off the morphine. Julie has noticed tremendous improvement in terms of decreased pain, improved mood and cognition as well as increased awareness and energy, and continues to receive VAHT sessions once or twice a month.

VAHT appears to be a promising therapy for patients with CRPS-I, however controlled studies need to be performed. ♥

¹ http://www.rsd.org/pdfsall/Higashimoto_Baldwin_Gold.pdf

² <http://brain.oxfordjournals.org/content/131/7/1854.abstract>

³ <http://www.journals.elsevierhealth.com/periodicals/pain/article/S0304-3959%2810%2900172-7/abstract>

http://www.rsdrx.com/stages_of_crpsrsd.htm

http://www.rsdrx.com/pt_and_crps%20part-I.htm