

Treatment of Peripheral Neuropathy With Microcurrent Electro-Acupuncture

Peripheral neuropathy (PN) is a painful, disabling disorder of the peripheral nervous system. Initial symptoms include burning pain in the hands and feet, and it often progresses into muscular weakness and gait difficulties. The condition is often precipitated by diabetes and AIDS. In the case of diabetes, there is often more central nervous system degeneration, while AIDS-related PN is usually limited to the peripheral NS. In many cases AIDS-related PN is a side-effect of medications such as stavudine, zalcitabine, didanosine, and zidovudine. Other cases are caused by the disease process itself. Painful peripheral neuropathy in both diabetes mellitus and HIV share a similar pathogenesis of axonal atrophy and demyelination (McReynolds, 1995).

Patients with PN often experience dry, itchy skin, and infections due to scratching it with possible weakened immune response is common.

Current medical treatment for PN includes NSAIDs such as ibuprofen or paracetamol for mild cases, or amitriptylene or other tri-cyclic anti-depressants for more advanced cases. These medications can cause uncomfortable side effects of fatigue, dry mouth and constipation. There is no known medical cure for PN.

Due to the lack of effective medical treatments there has been a great deal of interest in finding alternative medical treatments for PN. One that has shown usefulness is supplementation with carnitine, a naturally occurring substance in the body which plays a role in the conversion of triglycerides in mitochondria and which regulates the metabolism of various tissues, including nerve tissue outside of the central nervous system. HIV-positive individuals have been shown to have a shortage of carnitine.

Microcurrent stimulation has shown great promise in the treatment of PN for pain relief and strengthening of muscles and tendons facilitating improved walking and other common functions. Probe techniques that promote meridian balancing, course the channels, promote normal body polarity and energize key acu-points are very valuable. Pad treatment techniques that flood affected areas with microcurrent are also an important aspect of treatment. Dr. Niemtzow's protocol below is an innovative use of a "scrambled" polarity placements that he has found very effective that apparently helps the body's central nervous system reset its electrical potentials in some unknown way.

The following microcurrent protocols have been contributed by Margaret McReynolds, P.T., and Richard Niemtzow, M.D.

Study by M. McReynolds, based on 17 cases

Results: "In a prospective study we just completed, microcurrent was found to be significant for pain relief as well as improved gait function. The study includes seven months of treatments, and group, and six controls. In the study we used 8 Hz, negative polarity, burst mode, 100 μ A intensity, sloped waveform, and timer at 20 minutes."

Average # of treatments: 8

Frequency of treatments: Three times a week

Etiology of injury/condition: Axonal death, symptoms include painful paresthesias, weakness.

Method: Pad placements: St36 \rightarrow BI60, Liver 3 and Kidney 1 for pain from knees to toes. L5 S1 crossing to K1 (bilateral) then St 36 \rightarrow BI 60 for pain extending above knees.

Settings used: Acutron Mentor preset μ A Pads #3. or specific settings:

Intensity: 100 μ A

Hz: 8.0

Waveform: Sloped

Mode: Continuous

Polarity: Biphasic

Timer: 20 minutes

Adjunctive therapies: Osseous manipulation, massage, craniosacral techniques. Most patients exhibit down coordination or L.E.'s, weakness, and loss of forefoot and ankle flexibility. When these are present we combine massage and friction rub to the feet and ankles, balance and strengthening exercises. Patients often also experience spinal column alignment

problems. Neural therapy techniques are used to address these problems.

Further methods or results: Most patients are also issued a portable microcurrent to use at home one to two times a day for long term management. Relief is lasting, a few patients require periodic clinical follow ups for one or two sessions.

Protocol from Dr. Niemtow and Darren Starwynn (offered at an East-West Seminars event)

Peripheral Neuropathy

Use Acutron Mentor Probe #2 to treat □ points in sets on affected limbs: St 36→St 41, SI joint area→UB 60, Sp 9→Sp 6, Lv 3→K 1, GB 34→GB 41, groin→K 1, etc

Use polarized pads with □ asymmetrical polarity pad placements. i.e., left leg, + proximal, - distal, right leg, - proximal, + distal.

Pad parameters: 0.6 Hz – 2 Hz, square wave, □ 25 – 50 μA. Treat 20 minutes every other day.

For recalcitrant cases, try alternating microamp with narrow pulse milliamp treatment (mA Pad #2)

Colors - Turquoise (acute alterative), Indigo (sedative), Yellow if with leg weakness (stimulates the nervous system)

References for this article:

1) Lower Limb Presentation of HIV/AIDS by Danii Paterson

2) Physical therapy management of HIV disease: a retrospective study, by Galatino, ML and McReynolds MA, Oregon Health Sciences University, Portland, OR , quoted in J Int Assoc Physicians AIDS Care. 1995 Jun;1(5):15-8

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About Me



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For over 15 years Dr. Starwynn has helped practitioners create more profitable practices through his three day intensive seminars worldwide. A trailblazer, inventor, and foremost expert in Microcurrent technology, Dr. Starwynn is the author of many published articles and the book "Microcurrent Electro Acupuncture."

<http://www.microcurrentresearch.com/>

4) Cheng, et Al:

The Effects of Electric Current on ATP Generation, Protein Synthesis, and Membrane Transport in Rat Skin Clinical Orthopaedics and Related Research, #171, Nov/Dec. 1982

Summary: These researchers used in vitro slices of rat skin to determine some of the biochemical explanations for accelerated wound healing demonstrated in the above studies. By applying various levels of current to the samples, and then chemically analyzing them, they determined that skin treated at currents below 1000 uA showed up to 75% higher amino acids and up to 400% more available ATP than controls, and that skin treated at levels above 1000 uA showed depressed levels of these substances. Often less than non-treated controls.

16) J.A. Spadaro, S.E. Chase, and D.A. Webster:

Bacterial inhibition by electrical activation of percutaneous silver implants, Journal of Biomedical Materials Research, Vol. 20, 565-577 (1986)

Summary: Percutaneous silver wire implants were placed in rats, and the wounds inoculated with Staphylococcus aureus to test how much infection would spread. Microcurrent stimulation was passed through the wires, with + anodal current placed into implanted silver wire, and the - cathodal electrode placed on the rat's belly as a ground. It was found that significant inhibition of infection occurred, with the most marked results at 20uA current level. "Metallic silver can be effectively and efficiently activated to elicit its anti-microbial activity by the application of microampere electrical current."

17) Byl, McKenzie et.al.:

Pulsed Microampereage Stimulation: A Controlled Study of Healing of Surgically Induced Wounds in Yucatan Pigs, Physical Therapy, Volume 74, Number 3/March 1994

Summary: This study failed to confirm the superiority of microcurrent-stimulated wounds in test pigs over controls. A good review of previous studies is given as well as a discussion of which research variables could account for the inconclusive results, which vary from other studies that found microcurrent to be efficacious for wound healing.

20) DuPont:

Trigger Point Identification and Treatment with Microcurrent, The Journal of Craniomandibular Practice, October 1999, Vol. 17, #4

Summary: This article gives the author's techniques for locating and stimulating trigger points (TP's) using a microcurrent stimulator, specifically for the treatment of temporomandibular disorders. He states that electrical conductivity is highest over trigger points, and galvanic skin response (GSR) testing can be used to locate such points. He utilizes probe electrodes to treat small TP's, and pad electrodes to treat larger ones. Probe treatment is delivered @ 0.3 Hz, 20 - 40 uA, with treatment time of 10 - 30 seconds per site. He suggests administering treatment in 24-48 intervals, and states that results should be seen within 2 - 3 treatments. He acknowledges that these protocols are not necessarily the best ones, but work well for his practice. 2) Vanable, Joseph: The Role of Endogenous Electrical Fields in Limb Regeneration Limb Development and Regeneration, Part A, pgs. 587-596, Alan Liss Publishing, N.Y., 1983 2) Vanable, Joseph: The Role of Endogenous Electrical Fields in Limb Regeneration Limb Development and Regeneration, Part A, pgs. 587-596, Alan Liss Publishing, N.Y., 1983

<http://www.microcurrentresearch.com/research.htm>

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