

Acupuncture and Laser Acupuncture to Reduce Symptom Severity in Spinal Cord Injury

Margaret Naeser, Ph.D., Lic.Ac., Dipl.Ac. (NCCAOM)

Neuroimaging/Aphasia Research, Boston V.A. Medical Center

Department of Neurology, Boston University School of Medicine

mnaeser@bu.edu

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The National Institutes of Health (NIH), Bethesda, MD held a Consensus Development Conference on Acupuncture in November, 1997. Portions of the material included here are taken from my invited report for that conference, "Neurological Rehabilitation: Acupuncture and Laser Acupuncture to Treat Paralysis in Stroke and Other Paralytic Conditions and Pain in Carpal Tunnel Syndrome." The section "Other Paralytic Conditions" included Spinal Cord Injury. The conference was sponsored by the NIH Office of Alternative Medicine and the Office of Medical Applications of Research; the Proceedings were published by NIH in 1997 (pp. 93-109).

Three studies performed in China before 1997, where acupuncture was used to treat Spinal Cord Injury were summarized (Gao, 1984; Gao et al., 1996; Wang, 1992). None had a control group. Overall, 340/360 cases, 94.4%, had an outcome level of beneficial progress, including **reduction in muscle spasms, some increased level of sensation, improved bladder and bowel function**. Patients were treated ranging from 5 months to 2-3 years, or even for 5 years. Electroacupuncture along the Bladder meridian (paravertebral) area was especially recommended; however, low-level laser acupuncture may be better to use, now. Authors recommend beginning acupuncture as soon as possible after spinal cord injury, even during the acute stage of spinal cord shock, to help reduce the development of spasms. The acupuncture treatments were also helpful in the treatment of decubital ulcers.

Additional studies have been published which support these findings. Honjo et al., (2000) from Japan, observed that needle stimulation of Bladder 33 (third posterior sacral foramina) significantly improved bladder incontinence. Cheng et al., (1998) from Taiwan, observed that cases who received electroacupuncture (acupuncture points CV 3, 4 and Bladder 32) achieved balanced voiding in fewer days than cases who received no acupuncture. Cases treated with acupuncture starting within 3 weeks after injury required significantly fewer days of treatments, than those treated with acupuncture after 3 weeks. Cases with complete spinal cord injury, either with pronounced detrusor-sphincter dyssynergia in upper motor neuron lesion or with persistent areflexic bladder in lower motor neuron lesion, were not affected by acupuncture.

Yu (1993) from Beijing Medical University observed that 100 Hz electroacupuncture (EA) (2 times/day, 30 min/time) for 3 months had an antispastic effect on the limbs which was stable, but required additional long-term, follow-up treatments. He concluded that 100 Hz EA "decreased the excitability of the motor neurons in the anterior horns through the kappa opiate receptors, thus ameliorating the muscle spasticity of spinal origin."

Low-level laser therapy (LLLT) may be used on acupuncture points to help reduce spasticity (Naeser & Wei, 1994, pp. 40, 41). The term LLLT refers to low-level lasers (5-500 mW, red-beam or near infrared, 600-1000 nm wavelength) which when applied to the skin produce no sensation and do not burn the skin. They have been observed to increase cellular adenosine tri-phosphate (ATP). LLLT has been used in studies to treat pain for over two decades (reviewed in Tuner & Hode, 1999). LLLT has also been used to reduce paralysis in stroke patients (Naeser et al., 1995). **Laser acupuncture (and microamps TENS) can be applied to the hands and feet, in a home treatment program to help reduce muscle spasms** (Naeser & Wei, 1994, pp. 40, 41). They may also be used to treat decubitus ulcers (p. 59).

References

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Some Websites for Additional Information on Laser Acupuncture

1. A Licensed Acupuncturist in the U.S. who is using laser acupuncture with Spinal Cord Injury patients to reduce spasticity is: Patricia Worth, L.Ac., R.N., 9632 Olde Park Court, Tipp City, OH 45371 937-667-8533 pworth@woh.rr.com
2. Magnet Cap, which may be helpful to reduce spasticity in SCI patients, in my experience. This may include reduction of spasms in the stomach/abdomen, as well as in the legs. The caps are made by Jayne Ronsicki, Lic.Ac., Hudson, MA. email: Silverbog@aol.com Mention "Magnet Cap" in subject line. The cost is around \$40.00. Need to provide gender, M/F. Wear 10-15 minutes at a time, not continuously; may be helpful to wear before bed/chair transfers.
3. General Laser Acupuncture Information.
A short website page written by M. Naeser, Ph.D., Lic.Ac., to help answer questions from licensed acupuncturists interested in laser acupuncture: <http://gancao.net/ht/laser.shtml>
4. Naeser Laser, Acupuncture Website for Carpal Tunnel Syndrome with color photos of how the therapy is performed. Written by M. Naeser, Ph.D., Lic.Ac., to help answer questions regarding laser acupuncture research to treat CTS: <http://gancao.net/ht/cts.shtml>
5. General Low-Level Laser Therapy Information (from Sweden and European sources).
Extensive references and excellent information on low-level laser therapy research from around the world, written by the Swedish Laser Society: www.laser.nu
6. Website with Low-Level Laser Therapy on Acupuncture Points, for **Spinal Cord Injury**.
Written by Dr. Albert Bohbot, from France. Contains case histories, and videotapes of before and after treatments: www.laserponcture.net
7. Dr. Anu Makela, from Finland, who conducts low-level laser acupuncture research in many areas, including diabetes mellitus and neurological disorders: anu.makela@icon.fi
Peter Courtneage, Ph.D., Lic.Ac., Anchorage, Alaska, has studied with her in Finland:
LaserLLC@aol.com