

Laser Acupuncture/Carpal Tunnel Syndrome Update

Margaret Naeser

Editor's note: The lead story in the October 2002 issue of *Acupuncture Today* reviewed a study of laser acupuncture and carpal tunnel syndrome conducted by Dr. Margaret Naeser, a scientist at the Boston University School of Medicine. Following the publication of that issue, Dr. Naeser contacted *AT* to provide additional information not included in the original article. Dr. Naeser's letter is as follows:

Dear Editor:

Thank you for selecting to review in *Acupuncture Today* my recently published paper, "Carpal Tunnel Syndrome Pain Treated with Low-Level Laser and Microamps Transcutaneous Electrical Nerve Stimulation: A Controlled Study." I am especially pleased that you summarized two of the tables for inclusion. I thought I should mention a few additional items:

1. I am not a neurologist. I am a research professor of neurology at Boston University School of Medicine. I do not hold a MD degree; I have a PhD in linguistics, and conduct neuroimaging research with stroke patients who have aphasia. I am also a licensed acupuncturist in Massachusetts (I received my diploma from the New England School of Acupuncture in 1983), and have a diplomate in acupuncture from NCCAOM.
2. All of the laser acupuncture treatments in this research study were performed by licensed acupuncturists in Massachusetts, who also had research acupuncture clinical privileges at the V.A. Boston Healthcare System during the duration of the study.
3. The Naeser laser hand treatment program is not as complicated as your article might suggest. In fact, I have trained many patients to perform supplemental laser and microamps TENS treatments on their hands in a home treatment program. This includes patients with carpal tunnel syndrome (CTS), as well as stroke patients who have chronic hand weakness. The patients can purchase their own red beam laser and MicroStim 100 TENS device for a total cost of around \$500.
4. There is a website which I have prepared that explains the treatment program in more detail, and shows photographs of the treatment method. You can access the site at www.aaom.org/carpaltunnel.html. For more information on low-level laser acupuncture, you can visit www.aaom.org/laser.html.
5. The research program with CTS was initiated in 1993 and completed in 2000. There have been major advances in low-level laser technology since 1993. Because the research project started with a pulsed infrared laser (the infrared laser is used on deeper acupuncture points), we continued to use it throughout the study. Thus, the deeper acupuncture points at the elbow, shoulder and cervical neck area were treated with a pulsed infrared laser. Today, however, we would simply use a continuous-wave (not pulsed) infrared laser on these deeper acupuncture points. The use of the new continuous-wave infrared laser makes the treatment of these deeper points simpler.

6. In our two published studies with the laser acupuncture and microamps TENS treatments (a total of 44 CTS patients), there was a success rate of 88-92% in treating the pain of CTS (Branco & Naeser 1999; Naeser, et al., 2002). The overall time we have been able to follow up on our patients from the two studies is about 2-5 years. The patients have continued to do very well following their last treatment, with a less than 10% reoccurrence rate. Most of these patients were successfully treated following a repeat series of laser acupuncture and microamps TENS treatments in a few weeks.

In summary, there were no complications from using low-level laser acupuncture and microamps TENS in the treatment of carpal tunnel syndrome. This method is used on mild or moderate CTS cases (as defined with nerve conduction studies) with a 88% to 92% success rate. This method is not used on advanced, severe CTS cases where there is abnormality on electromyogram (EMG) of the *abductor pollicis brevis* (a muscle at the base of the thumb). The level of severity of pain may be mild, moderate or severe prior to beginning this treatment.

The CTS patients who were successfully treated with laser acupuncture and microamps TENS had already failed to achieve good pain relief with the other traditional methods (wrist splints, anti-inflammatory drugs, cortisone injections into the carpal tunnel, or even in some patients, surgical release) for a period of 3-30 months before entering our program. After the laser acupuncture and microamps TENS treatment program, no patients experience functional loss or worsened. Most patients chose to continue their work.

The goal of our research was to show that there was a new, conservative method of treating carpal tunnel syndrome, which could be used to reduce the future need for surgical release of the transverse carpal ligament. Our laser acupuncture and microamps TENS treatment is ideal to use earlier in the course of the disorder (preferably within the first year of symptoms). This would thus prevent the development of severe CTS where patients are referred for surgical evaluation.

Thank you again for offering me this opportunity to add more information to your already excellent and inclusive article. I hope acupuncturists will be able to make this painless, non-invasive treatment program widely available for patients with carpal tunnel syndrome.

Sincerely,

Margaret A. Naeser, PhD, LAc, Dipl.Ac.

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