

## *LETTERS TO THE EDITOR*

After reading the comments concerning use of thermal therapy in the newest 2009 version of the Consensus Document (1), we are disappointed and discouraged. Since 1964, we have used this therapy to treat elephantiasis of the extremities in more than 7,000 cases here in Shanghai, China, and the results are very encouraging particularly in controlling the elephantiasis attacks.

Preliminary experimental studies carried out years before have proven that the mechanism of the heat treatment relies on the repeated heat stimulation. This protocol disseminates heat into the deep tissue and results in a decrease in local tissue temperature that indicates improvement of local blood circulation and tissue metabolism. In addition, the breaking up and denaturing of the serum albumin into small molecular substances facilitates absorption into the blood. These changes result in partial relief of the edema of the leg. Improvement of local tissue metabolism may also be evidenced by functional recovery of the sweat and sebaceous glands. Hair regrowth on the legs and softening and normalization of the hyperkeratotic skin are often noticed in our patients.

Application of elastic bandaging after each course of treatment is another contributing factor in this therapy. The bandaging acts by controlling extravasation of tissue fluid, diminishing lymph stasis, and decreasing the size of the extremity. Bandaging also can help increase the interstitial tissue fluid pressure, limit extension of the reticular structure of the subcutaneous tissue and dilatation of the lymphatic vessels, and normalize valvular function of the lymphatics.

Personally, we agree that further studies should be carried out in the future. However,

we believe that "Practice is the sole criterion to test the truth," and as more and more patients are visiting our clinic for treatment, the convincing evidence is becoming obvious.

### *REFERENCES*

1. The Diagnosis and Treatment of Peripheral Lymphedema: The 2009 Consensus Document of the International Society of Lymphology. *Lymphology*. *Lymphology* 42 (2009), 51-60.

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I've read your recent "The Diagnosis and Treatment of Peripheral Lymphedema: 2009 Consensus Document of the International Society of Lymphology" (1), and I believe that as our breadth of research and clinical trial outcomes on low level laser improves that there is now a justification of including Low Level Laser as a therapy for lymphedemas.

A number of clinical trials (including our randomized double-blind study) have been conducted and several research projects are currently underway. One of the treatment products has been promoted in the US since 2002, Australia from the mid 90's, and clinical trials have been reported at several ISL meetings.

One specific Low Level laser has been FDA cleared for post- mastectomy lymphedema after rigorous FDA analysis on the clinical trial results. Our understanding is that this is the only specific lymphedema treatment that is FDA registered (most other products are registered as circulatory assistants).

If you study the scientific evidence (in vivo and in vitro), laser would be high on the list of lymphedema treatment options that have scientific support. Of course the trial sample sizes are not large in lymphedema (in fact there are never any large trials in any aspect of lymphedema treatment) but the double-blind crossover one is very rigorous.

There is comment in the Consensus Document that there are not enough randomized clinical trials for lymphedema. The Carati et al Low Level Laser Study is one of the few well controlled clinical trials and the only double-blind trial for a treatment modality. This was published in the peer reviewed Journal *Cancer* in 2003, hardly an insignificant journal.

Regardless of the various opinions about what additional evidence may be needed, Low Level Laser Therapy, I believe, should not be omitted from the Consensus Document and, of course, should be highlighted for further research.

#### *REFERENCES*

1. The Diagnosis and Treatment of Peripheral Lymphedema: The 2009 Consensus Document of the International Society of Lymphology. *Lymphology* 42 (2009), 51-60.

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