



Low Level Laser Therapy & lymphedema clinical research

Treatment of chronic postmastectomy lymphedema with low level laser therapy: a 2.5 year follow-up.

[Piller NB](#), [Thelander A](#).

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Ten women with unilateral arm lymphedema after axillary clearance (radical mastectomy) and radiotherapy for breast cancer received 16 treatment sessions with Low Level Laser Therapy (LLLT) over 10 weeks and seven patients were followed for 36 months. The effect of LLLT was monitored by arm circumference, plethysmography, tonometry, bioimpedance and a questionnaire dealing with subjective symptoms. After treatment, edema volume (both extracellular and intracellular) was decreased, the tissue (except for the upper arm) progressively softened or approached a normal texture, and the patients reported improvement in aches/pains, tightness, heaviness, cramps, pins/needles, and mobility of the arm. Skin integrity was also improved and the index for risk of infection decreased. Follow-up assessment at 1, 3, 6, and 30-36 months showed varying trends although at 30-36 months most subjective parameters and bioimpedance derived data on ECF and ICF tended to return toward pre-treatment levels. Arm circumference continued to show overall improvement, however, with a volume reduction of the affected arm reaching 29%. Tonometry also showed maintenance of near normal values for the involved forearm and anterior and posterior chest; however, the upper arm showed progressive induration. The data suggest that laser treatment, at least initially, improved most objective and subjective parameters of arm lymphedema.

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