

Title:

Low Level Scanning Laser and Lymphoedema: Effect on Limb Volume and Tissue composition.

Abstract:

Preliminary evidence suggests that low level laser therapy may be beneficial for lymphoedema. The aim of this study was to evaluate the short-term effects of low level scanning laser on lymphoedema.

Setting: A double – blind randomised controlled study which adhered to Consort guidelines.

Participants: Thirty (10M: 20F) presenting with lymphoedema and not currently receiving active treatment.

Methods: The primary outcome measure was change in limb volume using circumferential measures and bioimpedance. Secondary outcome measures included change in limb density derived from measures of bioimpedance and self- report of symptoms associated with lymphoedema, measured with a visual analogue scale. Following initial baseline measurements, participants were randomised into an active or sham laser treatment groups. Treatment comprised 3 x 1 h sessions, delivered on alternate days of a single week. Participants were measured immediately before and after each laser session.

Results: The preliminary results of bioimpedance analysis; self reported visual analogue scale and volumetric measures for 30 participants indicating that there is no significant difference in measures following laser treatment for either study group.

Discussion: This study provides information on the efficacy of low level scanning laser therapy for Lymphoedema finding no significant short term effect on limb volume or self reported symptoms.

Keywords: Low level scanning laser therapy, lymphoedema, limb volume, perception of limb swelling.