



## The Effectiveness of a New Endermologie-LPG Treatment

### Program for Arm lymphoedema:

### Objective and Subjective Data from 3 Case Studies

*MA Esplin, NB Piller, AL Moseley, M Massiot*

*Lymphoedema Assessment Clinic and Department of Surgery  
Flinders University and Medical Centre, Bedford Park, South Australia*

**Aim:** To describe the effectiveness of the LPG® technique, a non-invasive treatment involving mechanical manipulation of tissues for arm lymphoedema.

**Study Sample:** Three selected case studies are presented to demonstrate the varied effectiveness of LPG® in management of secondary arm lymphoedema. The results are part of a randomised, blinded trial comparing the LPG® technique with the gold standard of Manual Lymphatic Drainage.

**Method:**

Participants received 25 minutes of LPG® technique using a standardised treatment procedure followed by padded compression bandaging 4 days per week for 4 weeks. Both quantitative and qualitative measurements were taken twice weekly using validated equipment and tools, with a follow-up measurement 1 month after final treatment. Participants were encouraged to acquire a new compression garment after final treatment. During the follow-up period no other treatment for lymphoedema was utilised, except when a pre-existing self-management routine was in place.

**Results:** Extracellular fluid loss was measured by bio-impedance: Case 1 achieved an excellent result during the treatment period with 350 ml loss from the affected limb, which was maintained at follow-up. Reduction in subjective arm tightness and size was also achieved. During follow-up period there was complete compliance with wearing of a compression garment and daily self-massage. Case 2 had a moderate extracellular fluid loss of 140 ml from the affected limb after 4 weeks of treatment, with a slight increase at follow-up. Subjective benefits were reported as reduction in pain, heaviness, tightness, hardness and arm size, of which arm tightness, hardness and size were back to baseline at follow-up. During this time there was moderate compliance with wearing compression garment and daily self-massage. Case 3, with a history of rashes, acquired mosquito bites as well as a rash on both forearms during the treatment period. During this time extracellular fluid increased in both the arms, which remained at follow-up. The arm volume increased mainly in the forearm during the treatment period (location of rash/bites), but at follow-up the forearm volume had decreased with an increase in the upper arm volume remaining. During the follow-up period there was no self-massage and moderate wearing of a compression garment that was too tight on the upper arm. However during treatment, subjective reduction in arm hardness and relief of some arthritic symptoms in the lymphoedemous arm were reported.

**Conclusions:** Three case studies demonstrate the influence of patient-specific factors on the measured effectiveness of the LPG® technique in reducing limb volume. Factors such as level of compliance with treatment, compression garment fit and insect bites can influence results. Issues related to the individual patient should be carefully considered when generalising trial results into clinical practice. Patients need to be motivated by the therapist to care for themselves outside of treatment sessions to achieve best outcomes.