MLD OR PNEUMATIC COMPRESSION?
THE EVIDENCE BEHIND THE ACTUAL SCIENCE

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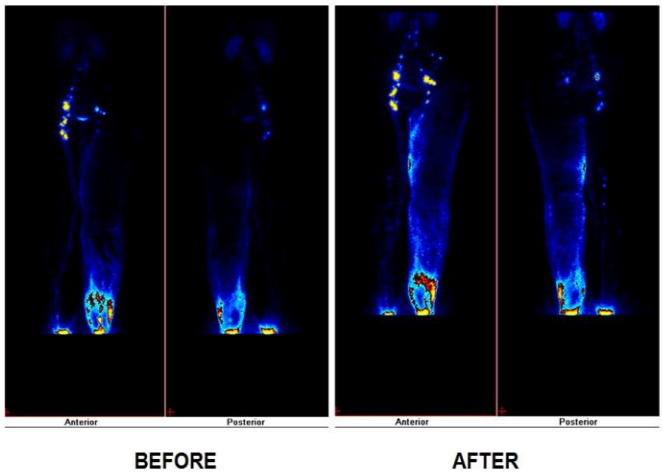
THE MEASURED EFFECTS OF MLD

Evidence proves that there is a hydraulic problem with the distribution of tissue fluid during Manual Lymph Drainage (MLD). Pressure was measured subcutaneously while performing MLD, evidence collected demonstrated that hand pressure moving distally does not hold a pressure below the area of the hand and eventually encompassing the entire limb once the proximal target has been reached. This action does not build up fluid pressures high enough to start flow in the proximal direction. In addition, data shows that this type of manipulation creates backflow. The reduction that is achieved and documented by therapist during MLD therapy is the result of the bandaging done on a consistent basis until discharge.

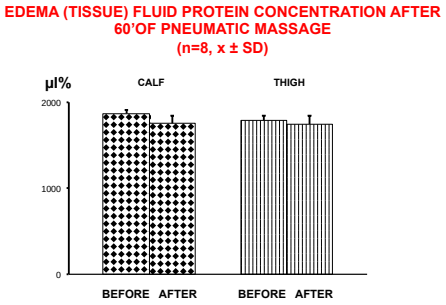
EFFECTIVENESS OF PNEUMATIC COMPRESSION DEVICES

Demonstrated with Lymphoscintigrams and Protein Measurements

Fig. 3



Lymphoscintigraphy demonstrates new channels after the use of the Bio Compression Pneumatic Compression Device. Isotope is seen all the way up through the femoral passage bypassing the inguinal divide. Collateral Channels are formed for tissue fluid flow; once the lymphatics are damaged they are nonfunctional and non-repairable, thus it is important to achieve collateral channels (lymphangiogenisis). Evidence of lymphangiogenisis is clear in the above lymphoscinetigraphy of a patient studied after 60 minutes of use of the BioCompression system.



Tissue fluid was measured to provide evidence of protein movement with tissue movement. Wool was inserted through tissue tubes in the calf and thigh during Pneumatic Compression and then removed after 60 minutes of treatment. The tissue was analyzed and as demonstrated above. The same percentage of protein remains equal to the amount of tissue fluid moved, if protein were not moved with the water content within the tissue the level of protein remaining after Pneumatic Massage would increase not remain equal. Evidence shows protein moves in equal distribution by percentage content of all tissue fluid movement.

MYTH VS. FACT

MYTH: Pneumatic Compression pools fluid in the groan.
FACT: Evidence shows movement of fluid through the femoral passage when the correct garment and pressures are applied.
MYTH: Pneumatic Compression does not move protein just water.
FACT: Evidence clearly shows the movement of protein.

CONCLUSION

All therapists are different in the pressure they apply. However, it is evident that the applied pressure only last for the short period of time it is applied. Pressures are erratic, and any results are lost as soon as the pressure is released without some sort of pressure distal to the applied pressure. Consistency is found when using Pneumatic Compression; tissue pressures are maintained distally preventing any backflow and maintaining achieved results all the way to the target for drainage. 90% of fluid is subcutaneously. It requires a minimum of 25mmHG (measured subcutaneously) to move fluid, requiring at least 60-80 mmHG surface pressure. Once the lymphatics are compromised, they remain compromised; the only solution is to create collateral movement through additional channels created with Pneumatic Compression Therapy.