

Blinded, Randomized, Prospective Clinical Study to Compare the Safety and the Efficacy of using 980 nm Diode Laser with Novel Energy Regulation and Visualization Technology to the Safety and the Efficacy of using 980 nm Diode Laser for Laser Assisted Lipolysis

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Background:

Laser Assisted Lipolysis (LAL) has become an accepted alternative to suction-assisted liposuction. However, despite being a minimally invasive method, some complications can occur. Controlled Laser Assisted Lipolysis (CLAL) is a new Novel Controlled Energy Regulation and Visualization technique allowing the control in real-time of the position of the cannula inside the fat layer and the delivery of energy. This study aims to compare the Safety and the Efficacy of LAL versus CLAL.

Study Design:

Ten female patients had two comparable topographical segments on two outer thighs treated by December 2009 using two different a 980nm-diode laser devices (Lipocontrol and LipoTherme, Osyris Medical) and were followed for one month. Measurement of the circumference of the right and left thighs and digital photography were performed in a standardized manner. Volume of fat tissue aspirated from each thigh was measured. Energy mappings were recorded on both treatment segments.

Results:

All study endpoints were met. Safety and efficacy results shown with the Lipocontrol were at least as good as using the LipoTherme. An average circumference reduction of 1.02cm +/-0.74cm and both notable and consistent contour correction were observed one month after the treatment. Average value of fat aspirated on LAL side was 157ml +/-62ml and on CLAL side was 164.5ml +/-54ml. Doses ranging from 35J/cm³ to 73J/cm³ were recorded. On average, localized energy excess of 62% + / - 22% compared to the average value were measured on the CLAL side. Those results are in good agreement with results obtained in previous clinical study (A Two Center Prospective Controlled Clinical Safety and Efficacy Study of 980 nm Diode Laser with Novel Energy Regulation and Visualization Technology for Laser Assisted Liposuction). Side effects were minor and transitional. Patient recovery time was reduced to less than three days using the CLAL.

Conclusion:

Both LipoTherme and LipoControl are safe and effective devices for LAL. Lipocontrol appears to be superior in terms of energy delivery and control. Our results suggest that the energy is delivered in a more homogeneous manner using the CLAL.