Protocol validated on JUNE 2, 2020 by Prof.RJ Bensadoun Oncologist

Potentiation of active ingredients (Phosphatidylcholine)

Pathology in the increase of active ingredient penetration

Title of article

Efficacy and safety of phosphatidylcholine Photo Active topical anti-cellulite gels combined with LEDs (red and near infrared) on Grade II-III thigh cellulite: A randomized double-blind study.

Aim

Cellulite of the upper lateral and posterior thighs and lower buttocks represents a common, physiologically unwanted condition, the etiologies and effective treatment of which are subjects of ongoing debate.

Objective

The aim of this double-blind, controlled study is to evaluate the efficacy and safety of a phosphatidylcholine-roman-based, cosmeceutical anti-cellulite gel combined with an LEDS panel emitting light at red (660 nm) and near-infrared (950 nm) wavelengths, designed to counter possible mechanisms that allegedly accentuate the presence of thigh cellulite.

Method

Nine healthy female volunteers with Grade II-III thigh cellulite were randomly treated twice daily with an active gel on one thigh and a placebo gel on the control thigh for 3 months. Twice a week, each thigh was exposed for a 15-minute treatment with LED light for a total of 24 treatments. At 6 and 12 weeks of the study, the following clinical determinants were obtained: digital photography, height and weight standardized measurements, standardized thigh band measurements, circumference, thickness, testing, body mass index (kg/m2), body fat analysis (Futrex - 5500/XL near infrared analyzer), and high-resolution digital imaging ultrasound of the dermadiposal border. In some patients, full-thickness biopsies of placebo treated with active sites were obtained. At 18 months, by digital photography, standardized height and weight measurements, and body mass index measurements were obtained.

Results

At the end of three months, eight out of nine thighs treated with phosphatidylcholine-based anti-cellulite gel and LED treatment had lowered cellulite grade by clinical examination, digital photography, and pinch test evaluation. Digital ultrasound at the dermo-adiposal interface demonstrated not only a statistically significant immediate reduction in hypodermal depth, but also fewer echo-like intrusions into the dermal layer. Three of six thigh biopsies treated for 3

months with the active gel and LED treatments showed less intrusion of subcutaneous fat into the papillary and reticular dermis. In nine placebo cases, minimal clinical changes were observed or measured by clinical determinants over a 3-month study period. At the 18-month evaluation period for the eight PLACEBO thighs, five thighs returned to their original cellulite classification, while three thighs continued to maintain their improved status. Patients experienced minimal, transient side effects that included pruritus, erythema and swelling.

Conclusion

The results of this small but well-documented randomized, double-blind study affirm that eight out of nine thighs with Grade II-III cellulite responded positively to a combined treatment, at 3 months program, with a phosphatidylcholine-based anti-cellulite gel-treatment with LEDS exposure, as determined by the clinical factors obtained. Patients experienced minimal and transient side effects. At the 18-month evaluation period (15 months post-treatment), five thighs have returned to their original cellulite classification, indicating the need for maintenance treatment. Future studies are needed to verify these provisional positive observations.

Etude J Cosmet Laser Ther. 2007 Jun;9(2):87-96. The effectiveness and safety of topical PhotoActif phosphatidylcholine-based anti-cellulite gel and LED (red and near-infrared) light on Grade II-III thigh cellulite: a randomized, double-blinded study. Sasaki GH1 , Oberg K, Tucker B, Gaston M.