

RANDOMIZED STUDY OF INTENSE PULSED LIGHT AND PULSED DYE LASER IN THE TREATMENT OF FACIAL TELANGIECTASIA

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**Background and Objective:** Two widely used devices for the treatment of telangiectasia include intense pulsed light and the pulsed dye laser. The goal of this study was to compare the StarLux® pulsed light system Lux G™ handpiece (bi-modal spectral range 500-670 and 870 - 1400 nm, Palomar Medical Technologies, Inc., Burlington, MA) with the Pulsed Dye VBeam® laser (595 nm, Candela Corporation, Wayland, MA) using standard treatment regimens. Two LuxG handpieces were used: in phase I, one with pulse widths of 20 and 100 ms, and in phase II, one with 10 and 20 ms.

**Methods:** Patients with skin types I-III with mild to moderate facial telangiectasia were enrolled: 10 in each phase. Treatment was randomized between facial sides for each device. Fluences for the Lux G handpieces were 40-50 J/cm<sup>2</sup> for the first pass and 30-40 J/cm<sup>2</sup> for the second pass. Fluences for the VBeam were 6-7.5 J/cm<sup>2</sup> for pulse widths of 3,6,10 ms and a 10 mm spot @ 11-14 J/cm<sup>2</sup> for the 3x10 mm spot and pulse widths of 10,20, and 30 ms. Each patient received 4 monthly treatments.

**Results:** In Phase I and II all patients (n=20) had statistically significant improvement of their facial telangiectasia at all visits. At the final endpoint (visit 4), there was complete equivalence between the VBeam® and the LuxG with either handpiece (100 and 20ms, and 10 and 20ms) on physician assessment scores (2.25 each). Side effects included: pain, purpura and edema. The majority of subjects (78%) selected the LuxG for an additional crossover treatment at their last session.

**Conclusion:** Our results show that both the Palomar® StarLux pulsed-light device using either handpiece and the Candela VBeam pulsed dye laser are effective, equivalent, and safe in improving facial telangiectasia.

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