

Skin rejuvenation using intense pulsed light: a randomized controlled split-face trial with blinded response evaluation

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OBJECTIVE: To evaluate efficacy and adverse effects of intense pulsed light rejuvenation in a homogeneous group of patients. **DESIGN:** Randomized controlled split-face trial. **SETTING:** University dermatology department. **PATIENTS:** Thirty-two female volunteers with Fitzpatrick skin type I through III and class I or II rhytids. **INTERVENTIONS:** Subjects were randomized to 3 intense pulsed light treatments at 1-month intervals or to no treatment of right or left sides of the face. **MAIN OUTCOME MEASURES:** Primary end points were skin texture and rhytids. Secondary end points were telangiectasia, irregular pigmentation, and adverse effects. Efficacy was evaluated by patient self-assessments and by blinded clinical and photographic evaluations up to 9 months after final treatment. Adverse effects were assessed clinically and by non-invasive skin reflectance measurements. **RESULTS:** Skin texture was significantly improved at all clinical assessments except at the 6-month examination ($P<.006$). The improvements peaked at 1 month after treatment, at which time 23 (82%) of 28 patients had better appearances of treated vs. untreated sides. Most patients obtained mild or moderate improvements, and 16 patients (58%) self-reported mild or moderate efficacy on skin texture. Rhytids were not significantly different on treated vs. untreated sides, and 19 patients (68%) reported uncertain or no efficacy on rhytids. Significant improvements of telangiectasia ($P<.001$) and irregular pigmentation ($P<.03$) were found at all assessments. Three patients withdrew from the study because of pain related to treatment. **CONCLUSIONS:** Three intense pulsed light treatments improved skin texture, telangiectasia, and irregular pigmentation but had no efficacy on rhytids. Adverse events were minimal, but included scar in 1 patient.