Use of light-emitting diode photomodulation to reduce erythema and discomfort after intense pulsed light treatment of photodamage.

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Abstract

OBJECTIVES:

This study evaluates the use of light-emitting diode (LED) photomodulation therapy to accelerate resolution of post-intense pulsed light (IPL) erythema.

RESULTS:

Mean erythema scores on the first visit were significantly higher (P = 0.0054) on the side not treated with LED (52.7 +/- 24.6) than on the LED-treated side (43.3 +/- 21.9). Visit 2 data showed a similar trend (P = 0.0281). The subjects reported similar findings with mean erythema scores on the first visit on the LED-treated side (46.7 +/- 25.3) compared with the untreated side (60.0 +/- 23.3); the difference was significant (P = 0.0382). On the second visit, the mean erythema scores trended lower on the LED-treated side (24.3 +/- 22.1) than on the untreated side (27.9 +/- 25.8), but the difference did not reach statistical significance (P = 0.1365). Erythema scores on both facial sides were 0 for all subjects 1 week after IPL treatment. Four patients commented that posttreatment discomfort was considerably less on the LED-treated side immediately after treatment.

CONCLUSION:

LED photomodulation treatment may accelerate the resolution of erythema and reduce posttreatment discomfort in IPL-treated patients with photodamage.

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