Photorejuvenation by Intense Pulsed Light with Objective Measurement of Skin Color in Japanese Patients

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BACKGROUND AND OBJECTIVES This study had two objectives: subjective evaluation of overall skin rejuvenation effects of relatively short-wavelength intense pulsed light (IPL) and objective changes in basic skin tone as measured by a spectrophotometer.

STUDY DESIGN/MATERIALS AND METHODS Twenty-five women selected at random received a series of three IPL treatments. Efficacy was evaluated over a 3-month follow-up period. Concurrently, a spectrophotometer was used to measure "lightness" (L*) to quantify the lightening effect changes to pre-treatment and post treatment basic skin tone.

RESULTS Subjective improvement of 50% or more was seen in 18 of 25 patients for pigmentation. One patient showed exacerbation of latent epidermal melasma as a complication. In the spectrophotometric analysis, the mean value of L* increased from a baseline value of 60.86 to 63.22, at 3-month follow-up period, with statistical significance.

CONCLUSION IPL skin rejuvenation using relatively shorter wavelengths and pulse widths brought about significant macroscopic and quantitative improvements, especially in the treatment of epidermal pigmentation and improvement of basic skin tone.