Abstract

BACKGROUND: Freckles are melanotic lesions frequently seen on the face and other sun-exposed areas. Previously evaluation of the severity of freckles has relied on the ultimately subjective assessment of the doctor or patient. Intense pulsed light (IPL) is newly introduced to treat facial freckles in Asian skin.

OBJECTIVE: To determine the effectiveness of IPL treatment for Asian patients with freckled skin and to assess a new and objective method for evaluation of the severity of freckling and posttherapy improvement using an ultraviolet (UV)-sensitive camera and film.

METHODS: Thirty-six patients with freckles were enlisted. IPL treatment was administered to patients with freckles in 4-week sessions. Irradiation wavelength was controlled using cutoff filters ranging from 550 to 590 nm, with a fluence of 25-35 J/cm², with single- or double-pulse illumination and a pulse width of 4.0 msec. The assessments of the physician and patient were compared with the objective dermatologic evaluation with black-and-white and UV photography used to derive two treatment parameters, cosmetic density of freckles (CDF) and freckles area and severity index (FASI), which are applicable in a clinical setting.

RESULTS: By the end of the study, two attending physicians assessed the results for 86.1% of the subjects as excellent or good, with 91.7% of the patients reporting that they were extremely or very satisfied. A statistically significant improvement in mean FASI score was demonstrated at 6 months after treatment compared with baseline (n = 36, p < .005; paired t-test). Mean overall improvement rate (n = 36), as determined from the difference in mean FASI score, was 63% at 12 weeks and 58% at 6 months.

CONCLUSION: IPL is an effective and safe treatment for facial freckles in Asian skin, with relatively few adverse effects and high satisfaction levels.

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