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Abstract

BACKGROUND: The long-pulsed Nd:YAG (1064 nm) laser has been shown to be effective in the treatment of blue venulectasias and reticular veins.

OBJECTIVE: The present study examined the clinical efficacy and long-term follow-up (12 months) of patients treated with the 1064 nm Nd:YAG laser technology.

METHODS: Twenty-five female patients (mean age 37.6 years, Fitzpatrick skin types II-V) were treated with up to three treatment sessions at 6-week intervals on a 5 cm2 surface area of vessels utilizing the 1064 nm Nd:YAG laser with a circulating cooling device. Treatment parameters were vessel size 0.2-2.0 mm treated with a double pulse of 7 msec at 120 J/cm2 and vessel size 2.0-4.0 mm treated with a single pulse of 14 msec, fluence 130 J/cm2, with a spot size of 6 mm. Improvement was judged by double-blinded observer evaluation, macrophotographic imaging, optical chromatography, and a patient evaluation scale.

RESULTS: Sixty-four percent of patients treated in the present study achieved 75% or greater clearing of vessels after a maximum of three treatment sessions. Optical chromatography revealed statistically significant decreased chromophore intensity (mean blueness reduction index of 41.2b-). Sixty-four percent of patients were greatly satisfied with the results of the laser treatment. Two patients manifested vessel recurrence when examined at 6 and 12 months, respectively.

CONCLUSION: The 1064 nm Nd:YAG laser can produce effective long-term photosclerosis of blue venulectasia and reticular veins. The potential for recurrence should be recognized by the vascular laser surgeon.

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