The 1064-nm Nd:YAG laser is an effective tool for treat-
ing telangiectasia, but there are limitations due to the
high fluences required. Large spot sizes are painful,
typically when treating small, superficial vessels with
modest absorption. To overcome this, a 1.5-mm hand-
piece was developed for the Apogee Elite Nd:YAG laser
platform (Cynosure, Inc., Westford, MA) to deliver higher
fluences to superficial lesions with less discomfort and
side effects. The objective of this study was to evaluate the ef-

cacy of this device for the treatment of telangiectasias. Bloom subjects pre-
senting with facial or leg telangiectasia 0.2 to 1.0 mm in diameter were treat-
ed using the Apogee Elite equipped with a 1.5-mm non-contact handpiece. Vessels were treated by tracing the vessels at 5 to 20-ms pulse duration and a fluences ranging from 300 to 400 J/cm², sufficient to cause either immediate vessel disappearance or coagulation. Subjects were evaluated at intervals of four to six weeks, and one or two additional treatments performed if necessary. The investigator graded lesions on a percentage scale ( Poor = 0–25%, Fair = 26–50%, Good = 51–75%, Excellent = 76–100%) and longer pulse durations (10–100 ms) were most effective and most tolerable to patients. However, large spot sizes are painful and edema may occur, particularly when treating small, superficial vessels which have modest absorption. Nevertheless the device has been shown in clinical trials to be effective.12

The Apogee Elite platform (Cynosure, Inc., Westford, MA) features 755-nm Alexandrite and 1064-nm Nd:YAG lasers. The device is FDA cleared for a variety of cosmetic indications including hair removal, vascular pigmentation. No purpura, scarring, or textural changes were reported or observed.

METHODS

Eleven patients (10 women, presenting with facial or leg telangiectasia 0.2 to 1.0 mm in diameter) were treat-
ed using an Apogee Elite Nd:YAG laser equipped with a 1.5-mm non-contact handpiece. Vessels were treated by tracing the vessels at 5 to 20-ms pulse duration and fluences ranging from 300 to 400 J/cm², sufficient to cause either immediate vessel disappearance or coagulation. Zimmer cooling was used.

Subjects were evaluated at intervals of four to six weeks, with one or two additional treatments performed if necessary.

RESULTS

Among the 11 patients, 50 lesions were treated. Of these, excellent clearance was achieved for eight lesions (16%) with one treatment, 20 lesions (40%) with the second treatment, and 13 lesions (26%) with a third treatment. Of the remaining nine lesions requiring a third treatment, 82% resolved after three treatments or less. Twenty-eight lesions (56%) resolved after one or two treatments. Four (8%) had persistent lesions. No purpura, scarring, or textural changes were reported or observed.

DISCUSSION

Recent studies by Bäumer and colleagues15 indicated that longer pulse durations may provide gentler heating of vessel and increase the ratio of laser energy absorbed by vessel versus skin. Moreover, the smaller handpiece size (1.5 mm) allowed for the more efficient use of higher fluences (300–400 J/cm²). All subjects exhibited at least 50% improvement overall. Favorable results for 50 to 70 lesions (82%) were noted after three treatments or less. Twenty-eight lesions (56%) resolved after one or two treatments. Four (8%) had persistent lesions. No purpura, scarring, or textural changes were reported or observed.

REFERENCES

3. Tavassoli SA, Haggard DC, Patel DK, et al. Long-pulse Nd:YAG laser for treatment of leg veins in 140 patients with assess-

tions for the treatment of leg telangiectasias with a nondamag-