Optimizing Treatment of Small and Large Leg Telangiectasia with a Long-Pulsed Nd:YAG CoolGlide® Excel Laser

Arielle N.B. Kauvar, M.D., and Paul M. Freidman, M.D.
Laser and Skin Surgery Center of New York, NY

Summary of data presented by Arielle Kauvar, M.D. at the American Society for Laser Medicine and Surgery Twenty-First Annual Meeting in New Orleans, Louisiana, April 2001.

With the increased role of infrared lasers in the treatment of leg veins, it has been found that vessels greater than 1.5 mm respond well but the treatment of telangiectasia is more difficult. The objective of this study was to evaluate the effectiveness of the Cutera CoolGlide Excel 1064 nm Nd:YAG laser system for the treatment of lower extremity telangiectasia. This was a prospective, controlled study with 13 female subjects of skin types I–III and ages ranging from 26 to 70 years (mean of 46 years). Treatments were performed on 31 treatment sites with vessels measuring 0.1 to 1.5 mm in diameter.

Each of the subjects received a single treatment and was evaluated immediately post-treatment and at 1 and 3 months after the treatment. Standardized photographs were evaluated by 3 non-treating physicians to evaluate efficacy. The laser has a wavelength of 1064 nm and selectable spots sizes of 3, 5, 7 and 10 mm. Treatments were performed with the 7 mm spot size, a pulse duration of 30 to 50 ms, and a fluence of 150 to 160 J/cm^2. Non-overlapping pulses were applied and a second pass was performed only if no clinical endpoint was seen. The contact-cooling feature of the handpiece was used to pre-cool and post-cool the epidermis. At the time of presentation, all 31 sites had been evaluated at month 1, while 16 sites had been evaluated at month 3. Key findings:

Single treatment of leg telangiectasia from 0.1 to 1.5 mm in diameter.

- Vessel clearance improved between 1 month and 3 month follow-up visits.
- All sites showed some clearance at 3 months after 1 treatment.
- 63% of sites had 76 to 100% clearance at 3 months after 1 treatment.

Vessel edema and erythema were commonly seen after treatment, lasting 1 to 5 days. At the 1 month visit, the side effects seen were mild to moderate erythema/matting (48%), mild hyperpigmentation (32%), mild blistering/crusting (6%), and mild thrombus (6%). At the 3 month visit, the side effects seen were mild to moderate erythema/matting (31%), and mild to moderate hyperpigmentation (50%).

The treatments were well tolerated with the rate of clearance greatest for the larger telangiectasia. The smaller vessels may require multiple treatments.

Published by Cutera, Inc. 3240 Bayshore Blvd., Brisbane, CA 94005 © August, 2001 99-000-6047