

Treatment of Reticular Leg Veins with a 1064 nm Long-Pulse Nd:YAG CoolGlide[®] Excel Laser

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

The objective of this study was to evaluate the effectiveness of the Cutera CoolGlide laser systems for the treatment of reticular veins of the lower extremity. This was a prospective, controlled two-center study with 20 female volunteers of skin types I–IV and ages ranging from 23 to 69 years (average age of 49 years). Treatments were performed on 24 reticular veins measuring 1 to 3 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. Efficacy was evaluated by 3 non-treating physicians using standardized photographs. The laser has a wavelength of 1064 nm and treatments were performed with a 10 mm spot size with no overlap from adjacent pulses, a 50 ms pulse duration and a fluence of 100 J/cm². The contact-cooling feature of the handpiece was used to pre-cool and post-cool the epidermis.

Immediate Response

Many subjects showed no immediate response. Occasionally transient clearing or darkening of portions of the veins was observed immediately after treatment. An urticarial reaction was occasionally seen a few minutes after treatment. Superficial thrombus formation occurred in 9 vessels.

Key Findings:

Single treatment of reticular leg veins from 1 to 3 mm in diameter.

- Vessel clearance improved between 1 month and 3 month visits.
- All sites showed some clearance at 3 months after 1 treatment.
- 67% of sites had 76 to 100% clearance at 3 months after 1 treatment.

Side Effects

Side effects seen at the 1 month and/or 3 month visits were minimal and included erythema/matting (21%), bruising (21%), hyperpigmentation (17%), and thrombus formation (33%). Only one patient required needle aspiration of a superficial thrombus.