

Treatment Results in 'Excellent' Hemangioma Clearance Rates in Infants

Early treatment of childhood hemangiomas with the 595 nm long-pulse pulsed-dye laser (LP-PDL) plus dynamic cooling may decrease the proliferative phase and result in excellent rates of clearing and few adverse events.

A team led by Roy G. Geronemus, M.D., of the Laser & Skin Surgery Center of New York, reviewed data on 90 patients (median age of 3.0 months) with a total of 105 hemangiomas (65 superficial and 40 mixed). Of the 65 hemangiomas, 52% were actively growing at the onset of treatment, 40% had plateaued but had not begun to involute, and 7% were involutinal. Of the mixed hemangiomas, 65% were actively growing, 20% had plateaued, and 11% were involutinal.

All hemangiomas were treated with the 595 nm LP-PDL that has dynamic epidermal cooling at two-to

Application of energy from a 595 nm long-pulse pulsed dye laser with dynamic epidermal cooling achieved complete or near-complete clearance of most lesions.

eight-week intervals depending on the stage of growth. A spot size of 7 or 10 mm was used with an average energy fluence of 11.5 or 8.6 J/cm², respectively. Dynamic cooling device spray with a duration of 30 ms was applied before each laser pulse, followed by a 30 ms post-laser pulse delay.

Mean duration of follow-up was 9.3 months: 8.1 months for superficial and 11.4 months for mixed hemangiomas. The mean number of treatments was 6.7—5.8 for superficial and 8.0 for mixed hemangiomas.

Of the 65 superficial hemangiomas, 15 (23%) completely cleared and 38 (58%) had near-complete clearance, the researchers reported in *Dermatologic Surgery* (2009;35:1-8). Only two (3%) had minimal clearance. Of the 40 mixed hemangiomas, six (15%) had complete clearance, 26 (65%) had near-complete clearance, and three (8%) had minimal change.

In addition, of 65 superficial hemangiomas, 13 (20%) showed no

residual thickness, 38 (58%) showed near-complete resolution of thickness, and two (3%) showed minimal change in thickness at the end of treatment. Of the 40 mixed hemangiomas, only three (8%) showed complete resolution, 13 (33%) had

near-complete clearance, and 11 (28%) had minimal change in thickness, the study found.

The investigators observed no cases of atrophic or hypertrophic scarring. On the date of the final treatment, hypopigmentation was

present in 10 (15%) superficial hemangiomas and five (13%) mixed hemangiomas. Hyperpigmentation was present in four (6%) superficial hemangiomas. Additionally, the researchers observed no cases of hyperpigmentation.