## New Leg Vein Tx Combines Laser and RF Energy

BY SHARON WORCESTER

Southeast Bureau

ATLANTA — A novel technology that combines diode laser and radiofrequency energy may be safe and effective for treating leg veins, Dr. Neil Sadick reported at the joint annual meeting of the American Society for Dermatologic Surgery and the American College of Mohs Micrographic Surgery and Cutaneous Oncology.

In a two-center study involving 50

women with lower extremity red or blue leg veins up to 4 mm in diameter, the Polaris LV system (Syneron Inc., Richmond Hill, Ont.) provided at least 50% vessel clearance in 76% of patients. The clearing persisted at 6 months of follow-up, said Dr. Sadick of Cornell University, New York.

The system uses a 915-nm laser. Patients were treated with one to three passes at each of three treatment sessions scheduled at 2-week intervals.

Pre- and posttreatment photographs

were graded by patients and an independent physician at a 2-month follow-up visit to determine the level of vessel clearance, and a score was generated by a novel computer-based assessment system. Independent observer analysis was corroborated by the computer imaging analysis.

Biopsy specimens also were provided for histologic assessment, which showed signs of coagulation and prominent endothelial degeneration in all treated vessels, said Dr. Sadick, who is a research consultant for Syneron.

A subsequent study showed that the Polaris LV system's effects were comparable histopathologically with those of the 1064-nm wavelength laser.

Complications with the Polaris LV system were minimal. A slight increase in the amount of hyperpigmentation and bruising was noted, compared with the 1064-nm laser, but pain was considerably less with the 915-nm laser.

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area and ALA may be able to more fully penetrate the thin skin of the eyelid, he suggested. In one study, topical PDT ALA treatment clinically resolved 8 of 19 nodular BCCs on the eyelids and periocular skin, while the other lesions had partial or no response (Acta Ophthalmol. Scand. 1999;77:182-8).

In a study of topical PDT with methyl-5 ALA, 79% of 350 nodular BCCs that were curetted before treatment with PDT were clinically clear. After 2-4 years' follow-up, 11% of the clinically clear lesions recurred (Br. J. Dermatol. 2001;145:467-71).

#### **Lasers That Target Melanin**

Lasers should not be used as a substitute for surgical removal of lentigo maligna, Dr. Spencer said.

In 11 patients with lentigo maligna who were treated with the Q-switched ruby laser on four occasions in a 6-month period, 6 of 13 biopsies taken after treatment were still positive for the lesion. Studies of lentigo maligna treatments with 532-nm and 1,064-nm Q-switched Nd:YAG lasers have shown similar results.

Some people may want to undergo laser removal of common acquired nevi for cosmetic reasons. There is a variable response to such treatment, in which nevi partially or completely lighten in color. This "debulks" and superficially removes the nevus from the epidermis but leaves residual nevus cells in the dermis, he said.

It is unclear if laser treatment of dysplastic or congenital, especially giant, nevi reduces the risk of melanoma. Treatment of atypical-appearing melanocytic lesions with lasers can provide an excellent cosmetic result, but it may run the risk of promoting malignant transformation. Lasers strip a lesion of its outer layer of UV-protecting melanin and create a scar in the papillary dermis that may clinically mask a deeper component, Dr. Spencer said.

"These concerns are very real," he said, but "people have been cautiously trying lasers on nevi for 20 years, and we haven't seen any malignant transformation."

Dr. Spencer said that laser removal of nevi "should be studied in a more formal way, but people have been very afraid to do this."

Clinicians have widely accepted the removal of nevi of Ota with lasers for only cosmetic improvement, so laser removal of large congenital and common acquired nevi should be considered, he said.

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