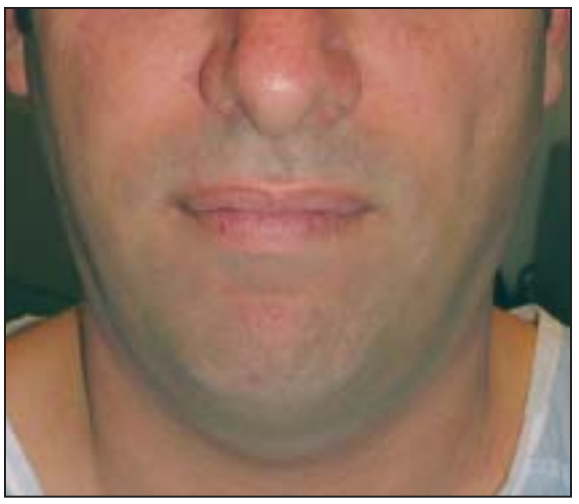

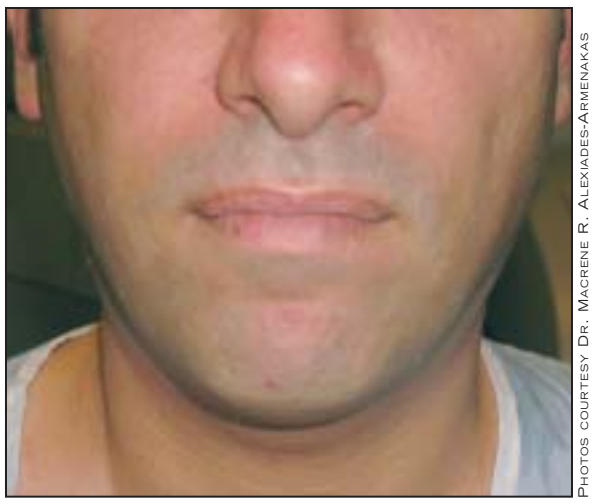

Photos courtesy Dr. Macrene R. Alexiades-Armenakas

Radio frequency energy treatment was most effective for improving neck laxity, and was noteworthy for being painless and offering rapid treatment and recovery times.

RF Energy Device Safely Benefits Skin

BY MITCHEL L. ZOLER
Philadelphia Bureau

GRAPEVINE, TEX. — Radio frequency energy treatment of the face and neck led to modest but discernible improvements in rhytids, skin laxity, and photoaging in a small series of patients, Dr. Macrene R. Alexiades-Armenakas said at the annual meeting of the American Society for Laser Medicine and Surgery.

The dual-mode radio frequency device she used was the Accent system made by Alma Lasers. Although the device was not approved by the Food and Drug Administration when Dr. Alexiades-Armenakas did the study, the unit received FDA marketing approval in late April for the treatment of rhytids and wrinkles (SKIN & ALLERGY NEWS, June 2007, p. 9). She disclosed no financial relationship with Alma.

The device produces both unipolar and bipolar radio frequency energy. In unipolar mode, the device creates an alternating electric field that heats tissue at a depth of 2-4 mm by rapidly changing the polarity of charged particles in the skin. The heat produces volumetric changes to a depth of up to 20 mm. In bipolar mode, the device creates an electromagnetic field that heats tissue by causing rapid movement of water molecules, which also produces volumetric changes to a depth of up to 20 mm.

The most discernible effects on facial and neck skin were achieved with a protocol that combined both modes, said Dr. Alexiades-Armenakas, a dermatologist in private practice in New York.

Treatment began with four sequential, 30-second unipolar passes over the skin at 100 J/cm^2 to produce a target tissue temperature of 40° C. They were quickly followed by a series of four bipolar passes of 30 seconds each at 70 J/cm^2 that were also designed to produce a target temperature of 40° C.

To help maintain the target temperature during treatment, all passes were completed on one side of the face before the other; the neck was done last. No topical anesthesia was used.

In several patients, this regimen produced an immediately discernible skin tightening, she said.

Dr. Alexiades-Armenakas reported results for the first 10 patients in this series after they received one to three treatments (average 1.3) given at monthly intervals. The impact of treatment was rated on a blinded basis by two experienced dermatologists. They judged that treatment produced an average improvement in overall appearance of about 10%.

Treatment was most effective for improving neck laxity, and was noteworthy for being painless and offering rapid treatment and recovery times, with no adverse effects or complications so far, she said.

The assessment of these patients was truly blinded. "I received a stack of photographs of patients, and I did not know

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New Laser May Make One-Pass Treatment Possible

BY DAMIAN McNAMARA
Miami Bureau

PALM BEACH, FLA. — A new laser with a unique wavelength holds promise for skin rejuvenation and offers advantages over fractional resurfacing, Dr. David J. Goldberg reported at the annual meeting of the Florida Society of Dermatology and Dermatologic Surgery.

The Pearl 2790-nm yttrium-scandium-gallium-garnet laser (Cutera Inc.) "is different from a fractional device. The laser treats the whole epidermis, so you don't need multiple treatments," said Dr. Goldberg, director of laser research and Mohs surgery at Mount Sinai School of Medicine, New York.

Dermatologists will be able to target uneven skin texture and improve fine lines and photodamage with the new laser, and treatment of mild acne scarring is another potential indication, said Dr. Goldberg, who is a researcher for Cutera.

"It's brand new. I am going to guess no one here has this laser yet," he said at the meeting. The company plans to launch the laser in select cities this summer.

The Pearl 2790-nm laser is indicated for skin types I to III, "with use for skin type IV as a goal," he noted. Fast treatment time is another feature. A full-face treatment takes approximately 30 minutes.

Longer downtime is a tradeoff, however, compared with fractional resurfacing. Patients "are in pain for a while, no question about it. But the results are great," Dr. Goldberg said. "Now more and more people will accept a little downtime if they get a better cosmetic outcome."

In general, flaking begins 2 days after treatment. Peeling starts on day 3 with skin reepithelialization; some erythema will still be seen on day 4. Most patients are ready to return to work and daily activities by this time.

"It is a pretty simple procedure. One pass is required," he said. Apply topical anesthesia for 30-45 minutes beforehand to minimize pain during the procedure.

The energy ranges from about 1 J/cm^2 to 3 J/cm^2. Most people use the 2.3 J/cm^2 setting. There is some flexibility—adjusting the fluence changes the extent of epithelial damage, Dr. Goldberg said.

The user interface is simple and the 9-ounce hand piece is very lightweight, he said. Also, there are no disposables with this system.

The 2790-nm wavelength is near, but not at, the peak of water absorption in the skin. This allows for a small amount of beneficial thermal effect and controlled ablation of the skin, he explained. ■

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what the treatment was or what the outcome was supposed to be. I looked at each picture and rated the appearance from 0 to 4 with 0.5-point increments," said Dr. Jeffrey S. Dover, a dermatologist in private practice in Chestnut Hill, Mass., who was one of the two dermatologists who rated the outcomes.

Although the 47 patients in the study were followed for 1 year after treatment, Dr. Alexiades-Armenakas had not fully tabulated all of the results at the time of her meeting presentation. She stressed that the treatment regimen for this device is still being optimized.

Her preliminary results from the combined treatment protocol showed progress beyond the results she had obtained in an earlier study that used either unipolar or bipolar energy. In that series, 10 patients were treated in a split-face fashion, with the unipolar device used on one side and the bipolar device on the other.

The unipolar treatment involved one or two passes of 20 seconds each at 100 J/cm^2 to produce a target temperature of 40° C, followed by three additional passes that delivered energy at steadily decreasing levels to maintain the tissue temperature at 40°. On the opposite side of the face, patients received bipolar energy at 70 J/cm^2 for one or two 20-second passes to produce a target temperature of 40°, followed by three additional passes with steadily decreasing energy levels. All patients received four treatments at weekly intervals.

Those treatments were also painless and rapid, and caused no adverse effects aside from mild and transient erythema. Blinded assessment of the patients showed an average improvement of about 5% with unipolar energy and about 6% with bipolar energy, Dr. Alexiades-Armenakas said. ■