

# Laser May Be Better for Hidradenitis Suppurativa

BY JEFF EVANS  
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KISSIMMEE, FLA. — The 1,064-nm neodymium:YAG laser is effective for treating and preventing the recurrence of hidradenitis suppurativa lesions, according to the results of a randomized, controlled study of 22 patients with the disease.

The 1,064-nm Nd:YAG laser is commonly used for laser hair removal but also seems well suited for treating hidradenitis suppurativa, which histologic studies suggest is a disease of follicular occlusion with apocrine gland involvement as a secondary event, according to Dr. Emily P. Tierney and her colleagues in the department of dermatology at Henry Ford Hospital, Detroit.

Despite the fact that medical treatments for hidradenitis suppurativa have had limited efficacy against the disease and surgical treatment is associated with high morbidity, an initial pilot study conducted by Dr. Tierney and her associates found the laser to be efficacious in treating the disease.

One of Dr. Tierney's coinvestigators in Henry Ford's dermatology department, Dr. Iltefat Hamzavi, previously conducted a study of the Nd:YAG laser in four patients with dissecting cellulitis, a disorder analogous to hidradenitis suppurativa. In that study, 1 year after the initiation of laser treatment, patients



The inguinal lesions of a patient with a 15-year history of disease are shown.

achieved decreased pus formation, a reduced reliance on systemic treatments, and a controlled or terminated disease process without dyspigmentation (*Dermatol. Surg.* 2006;32:1039-44).

In a poster presentation at the annual meeting of the American Society for Laser Medicine and Surgery, Dr. Tierney and her coinvestigators reported on the effect of the laser on 22 patients with bilateral and symmetrical disease who were randomized to receive laser treatment plus topical antibiotics at affected sites on one side of the body and only topical antibiotics on affected sites on the contralateral side.

The patients had a mean age of 41



Lesion improvement is seen 2 months after four monthly laser treatments.

years, and 15 of them had Hurley stage II hidradenitis suppurativa, which is characterized by recurrent abscesses with tract formation and cicatrization and single or multiple widely separated lesions. The other seven patients had stage III disease, which is exemplified by diffuse or near diffuse involvement, or multiple interconnected tracts and abscesses across the entire area.

Half of the 22 patients had Fitzpatrick skin type III, followed by 4 patients with type V, 3 with type IV, 3 with type II, and 1 with type VI.

After a series of up to four laser treatment sessions conducted once per month, there was a significant improve-

ment in clinical scoring criteria based on a modified Hidradenitis Suppurativa European Research Group (HISERG) scale at all three anatomical sites treated with the laser (groin, axilla, and inframammary sites).

Compared with control sites, laser treatment improved the modified HISERG scale by the greatest amount for inguinal lesions (68% vs. 2%). Laser treatment also significantly improved HISERG scale scores of lesions in the axilla (63% vs. -11%) and at inframammary sites (30% vs. -71%).

Dr. Tierney reported that their research was supported by a Cutting Edge Research Grant from the American Society for Dermatologic Surgery and the Shahani Fund, a private individual donor that supports research at Henry Ford Hospital. Neither Dr. Tierney nor Dr. Hamzavi had any conflicts of interest to disclose.

At 2 months after the end of treatment, the patients continued to have significantly better modified HISERG scale scores at all sites combined, compared with all control sites combined.

The differences in response to laser treatment among anatomical sites appeared to be driven by the properties and distribution of hair at the site (density, volume, thickness, and proportion of follicles in anagen phase), according to the investigators. ■

## Single Treatment With Fractional Laser Reduces Perioral Wrinkles

BY SHARON WORCESTER  
Southeast Bureau

KISSIMMEE, FLA. — A single treatment with a microfractional 2940-nm erbium:YAG laser resulted in perioral wrinkle reduction of greater than 40% and an improvement of 2-3 grades on the Fitzpatrick wrinkle assessment scale in a recent study.

In all, 23 patients with a score of 5-9 on the 9-point Fitzpatrick scale underwent full-face laser treatment. The improvements from baseline were noted after the first treatment, Dr. E. Victor Ross reported at the annual meeting of the American Society for Laser Medicine and Surgery.

The patients, who had skin types ranging from I to III, were treated with a 6- to 10-mm spot size and energy ranging from 400 to 920 microbeams/cm<sup>2</sup>.

Between one and three passes were used in less photodamaged areas, and three to eight passes were used in more severely damaged areas. Additionally, small areas were treated with a traditional short-pulse erbium:YAG laser at four passes and 5 J/cm<sup>2</sup> to allow comparison of wound healing time and clinical end points between the two lasers.

Preliminary findings suggest that the microfractional erbium:YAG treatments resulted in a similar wrinkle response to that observed with traditional short-pulse erbium:YAG laser treatments; however, heal-

ing times were reduced with the microfractional erbium:YAG, said Dr. Ross of the Scripps Clinic in San Diego.

Dr. Ross acknowledged that he has received equipment, consulting fees, and a research grant from Palomar Medical Technologies Inc.

"There was very rapid recovery, both histologically and clinically," he said, noting that the average full-face treatment time was 48 minutes. Re-epithelialization of the basal layer of the epidermis occurred within 12-24 hours, and complete re-epithelialization occurred within 4-5 days.

Bronzed skin was noted immediately after the treatments, and some patients experienced focal pinpoint hemorrhage. At 2 weeks, however, only mild erythema remained, he said.

On microscopic examination, separated columns of ablation were noted, typically with a depth of 200 microns and 20-30 microns of residual thermal damage at the periphery of the conical microwounds.

Not only did the treatment lead to smoothing of the skin and reduction of perioral wrinkles, but improvements in dyschromia were also noted, Dr. Ross said.

Although optimal treatment parameters for wrinkle reduction remain to be defined, these findings suggest that microfractional 2940-nm laser treatment is superior to traditional short-pulse erbium:YAG laser treatment for this purpose, he concluded. ■

## Radiofrequency Ablation Helps Relax Glabellar Frown Lines

BY SHARON WORCESTER  
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KISSIMMEE, FLA. — Focal radiofrequency ablation of the neural innervation of the glabella muscle complex provided an effective and possibly more durable alternative to botulinum toxin in a series of 10 patients with concerns about glabellar frown lines.

The procedure, which is known as glabellar frown relaxation (GFX) radiofrequency ablation, was approved by the Food and Drug Administration for tissue ablation last year and has been touted as a new and improved means of relaxing frown lines without the use of toxins.

Of the 10 patients who underwent the treatment, 6 had an immediate complete response and 4 had partial attenuation of their frown lines, as judged by the inability to frown, said Dr. Cameron Rokhsar of Albert Einstein College of Medicine, New York.

Additionally, medial brow elevation occurred in five of the patients, he noted at the annual meeting of the American Society for Laser Medicine and Surgery.

The effects remained apparent at 3-month follow-up.

All patients tolerated the procedure;

side effects were limited to bruising and moderate pain during treatment.

The GFX radiofrequency ablation procedure, which is performed under local anesthesia, involves insertion of a probe at the lateral canthi on each side and the use of mild electrostimulation to identify the rami of the temporal branch of the facial nerve innervating the corrugators.

A 20-second radiofrequency pulse is applied to cause the focal nerve injury, and the probe is then advanced on the nasal sidewall to identify and ablate the branches of the angular nerve innervating the procerus.

Although both botulinum toxin and GFX radiofrequency ablation target the nerves that cause frown lines, botulinum toxin therapies block signals sent from the nerves to the muscles while GFX radiofrequency energy is used to create focal damage to effectively weaken the motor nerves, Dr. Rokhsar explained.

As a result, the duration of effect is increased with GFX radiofrequency; some reports suggest that the duration can be up to 2 years, compared with 3-4 months for botulinum toxin treatments. Studies to review long-term efficacy are underway, he said, adding that "the procedure has a learning curve." ■