New Fraxel Laser Gaining Popularity in Practices

BY BETSY BATES
Los Angeles Bureau

LAS VEGAS — A new version of the Fraxel laser penetrates more deeply—yet causes less pain and requires fewer treatments—than does the original Fraxel system, speakers said at the annual meeting of the American Society of Cosmetic Dermatology and Aesthetic Surgery.

The new Fraxel SR1500, approved by the Food and Drug Administration in August 2006, promised enhanced efficacy and safety, said Dr. Richard Fitzpatrick, a dermatologist in private practice in La Jolla, Calif.

"For the most part, I think that has held up," he said.

The idea behind Fraxel lasers is to deeply penetrate dermal tissue in a specific pixel-like pattern, leaving behind healthy tissue surrounding the tiny wounds.

The original Fraxel was approved by the FDA in 2003 for the treatment of wrinkles, melasma, and scars from acne and surgery, among other indications. The new Fraxel, which costs in the range of $110,000, is capable of deep penetration—to 1,200 microns—and includes a telescopic lens and dosage-control system that permits the use of much higher energy ranges.

"You almost have to rethink Fraxel" in adjusting to the new device, said Dr. Vic Narurkar, who is in private practice in San Francisco. "Depth really does matter."

Moreover, it is important to understand the confusion regarding the term "fractional resurfacing," he said in an interview following the meeting.

True nonablative fractional resurfacing requires a midinfrared wavelength, such as the 1550-nm wavelength of the Fraxel SR1500 and the original Fraxel SR750. "Most other fractional devices are marketing toys and are not supported by clinical and histologic studies," Dr. Narurkar said.

Although Dr. Fitzpatrick limited his energy settings to about 8-20 mJ/cm^2 on the face with the first-generation Fraxel, he feels comfortable using the midteens to 30 mJ/cm^2 with the new Fraxel, and has even "pushed the envelope" beyond that.

Dr. Narurkar now routinely treats Fitzpatrick skin types I-III at 40 mJ/cm^2 for moderate photodamage, and reports being comfortable using higher fluences in acne scar patients of all skin types.

"Coverage"—the number of microthermal zones of damage required—depends on the condition being treated and the anatomical location, the speakers agreed.

A level 6 setting on the laser translates to 20% coverage, with levels building or declining in 3% increments, Dr. Fitzpatrick explained. A level 7 achieves 23% coverage, for example.

The ease of the system does not negate the importance of being careful, however. The laser's capability of going to extreme depths with a high degree of energy can produce "an intense collimated dermal reaction," which Dr. Fitzpatrick said is unlike any he has ever seen.

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DR. NARURKAR

Choosing a coverage setting that is too high can be dangerous.

"You will reach the point, if you go too far, where you will risk bulk heating. You will generate thermal necrosis of the area," he said.

On the other hand, significant swelling and erythema are very unusual, and the increased energy delivery makes for better results, Dr. Fitzpatrick said, adding, "High pulse energies are more effective for almost everything."

For mild to moderate photodamage on the face, he performs four treatments using energy in the range of 10-20 mJ/cm^2, opting for 26%-32% coverage at each session for a total 85% coverage by the end of the treatment series.

For acne scars, he starts at 25 mJ/cm^2 and about 26% coverage, unless patients "will put up with a little more" for more immediate results. In that case, he begins at 40 mJ/cm^2 and aims for 32% coverage.

"The Fraxel does better with acne scars than any device I've ever used," he said.

Dr. Narurkar agreed, saying that both the first- and second-generation Fraxel lasers are "rapidly becoming the treatment of choice" for this indication.

Across indications, fewer treatments are required with the second-generation Fraxel, although patients can expect more edema when higher settings are used, he said.

"They will see results in three treatments instead of five," Dr. Narurkar said. "It hurts less and my patients are extremely satisfied with the treatment."

Both speakers disclosed that they have received grant or research support from Reliant Technologies Inc., maker of the Fraxel laser. Dr. Fitzpatrick is a paid consultant to the company as well. ■

Ponder the Promises, Perils of IPL Devices Prior to Purchase

BY DOUG BRUNK
San Diego Bureau

CARLSBAD, CALIF. — At a symposium on laser and cosmetic surgery sponsored by SkinCare Physicians, Dr. E. Victor Ross Jr., shared what he looks for in a good intense pulsed light device.

First, he looks for variability in spectral shapes. This allows tailoring and fine-tuning of applications to control the clinical outcome, said Dr. Ross, director of the Scripps Clinic Laser and Cosmetic Center in San Diego.

The ability to predictably treat vascular lesions while preserving epidermal pigmentation includes the ability to treat through a tan. "I always hear people from the northeast say, 'We don't treat tanned patients.' You have to be cautious, but you can do it," he said. With tanned patients you need to use "all the weapons [you have], which means external cooling and internal cooling, particularly between the vascular lesions."

Efficient cooling is also important. "It's not about cooling the skin," he said. "It's about keeping the hand piece cool."

IPL devices should also support some laser platforms, such as the erbium:YAG, the neodymium:YAG, or the erbium glass laser, he said, adding that a reliable external calibration system that interrogates the entire system from the power supply to the quartz or sapphire end piece is important. He also recommended user-selectable pulse durations that allow for the proper balance of fluence, wavelength, and cooling.

Dr. Ross also mentioned the importance of reproducibility in outcomes from machine to machine based on the same panel settings, and long lamp lifetimes with minimal degradation over thousands of pulses.

Rounding out the list of qualities are flexibility in spot size, reasonably fast repetition rates, and ergonomic simplicity.

Undesirable IPL features, he said, include no integrated cooling, small spot size, no capability for laser upgrades, and subpar calibration algorithms.

Candidates for his "Miss IPL" contest include the StarLux, the Luminus One, the Omnilight and the Xeo. "But there are many [others] I just haven't gotten in contact with," said Dr. Ross, who disclosed that he has research relationships with Palomar, Cutera, and Laserscope. "These are the ones I like and know."

He concluded that the best IPL "is the one you feel most comfortable with, the one you use so much that your fingers intuitively move to the right locations on the instrument panel, and the one you feel comfortable teaching people about."

In a panel discussion, Dr. Christopher B. Zachary echoed that notion. "It's all about getting a device that you trust, that you know, that you are capable of using day in and day out," said Dr. Zachary, professor and chair of the department of dermatology at the University of California, Irvine. "There's a huge difference between using the old intense pulsed light devices and the new ones. The new ones are much more efficient." ■

Carbon Plus Laser Touted for Rejuvenation of Asian Skin

BY DAMIAN McNAMARA
Miami Bureau

LAS VEGAS — An aging Asian face can be rejuvenated with application of carbon followed by nonablative laser treatment.

"My nonablative toy at the moment is carbon plus a Q-switched Nd:YAG laser," Dr. Ruban Nathan said at an international symposium on cosmetic and laser surgery.

Carbon applied to skin serves as an artificial chromophore to transfer energy into the epidermis, Dr. Nathan said. "You leave carbon on for half an hour or steam it in to skin for even better results."

With the growth of ethnic populations in the United States, addressing dermatologic concerns specific to ethnic skin is of growing importance to U.S. dermatologists, said Dr. Nathan, who is in private practice in Kuala Lumpur, Malaysia.

Pigmentation and sagging are the cosmetic concerns of older Asians—"end of story," Dr. Nathan said. These patients will come for treatment of lentigos, dyschromias, ephelides, melasma, periorbital hyperpigmentation, and maturational hyperpigmentation. Depigmentation agents, microdermabrasion, fruit acids, intense pulsed light (IPL), and fractional resurfacing are treatment options.

Researchers assessed 10 women with Fitzpatrick skin types III-V with melasma unresponsive to previous therapy treated with fractional thermolysis, for example (Dermatol. Surg. 2005;31:1645-50). "This study showed some moderate improvement, but the cost is prohibitive where I come from," Dr. Nathan said.

"Lasers are not available everywhere in the world," Dr. Nathan said. "I wish these were more affordable. They are available for the few." In addition, there is a paucity of data on reactions of Asian patients to laser treatment.

Radiofrequency devices might also benefit ethnic skin types. This treatment was effective for cosmetic improvement of nasolabial folds, marionette lines, and jowls in a study of 85 Japanese women (Lasers Surg. Med. 2005;36:92-7). "They had good results," Dr. Nathan said.

Counsel patients about potential side effects, such as risk of hypopigmentation with IPLs, Dr. Nathan said. Also provide strict sun avoidance strategies, such as UV screening on car windows and limitations on outdoor activities.

Postinflammatory hyperpigmentation is another clinical concern following laser treatment of Asian skin. The risk is relatively low with the carbon plus Q-switched Nd:YAG laser regimen, Dr. Nathan said. "I've done this in 60 or 70 patients and I think two had postinflammatory hyperpigmentation."

Dr. Nathan emphasized a need for additional physician education on the unique issues affecting Asian skin. "Anyone who is seeing a lot of Asian patients should go to conferences like this or conferences in Asia so you know the parameters and pitfalls." ■

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