Successful Management of Rosacea with Lasers

Specialists share insights to help dermatologists and patients get the most from laser therapy for rosacea.

By Paul Winnington, Editorial Director

Though a novelty just a few years ago, the use of lasers to treat rosacea has become mainstream. In fact, when it comes to managing rosacea, "laser really should be a first-line therapy," says Arielle N. B. Kauvar, MD, Founding Director of New York Laser and Skin Care and Clinical Associate Professor of Dermatology at New York University School of Medicine. Unlike available medications that are not particularly effective for reducing redness or eliminating telangiectasia, light energy in the 500-600nm range specifically targets erythema and underlying vasculature.

Despite the ease and availability of laser treatment, it may not be a good fit for every dermatology practice. At the same time, laser therapy for rosacea may actually offer a reliable and practice-friendly entrée into the field of laser therapy. Below, specialists offer tips on laser selection, patient education, and adjunctive measures to ensure best results.

Targeting Rosacea

To treat individual telangiectases, Dr. Kauvar uses the 532nm KTP laser, which offers various spot sizes, to trace out vessels. Typically, she uses a 2-3mm spot size to treat individual vessels and says she achieves good results with two to three treatment sessions.

More diffuse redness consistent with flushing and blushing will also respond to the 532nm KTP laser, though a larger spot size is indicated. Dr. Kauvar typically uses the Gemini (Iridex) with a 10mm spot, allowing her to "rapidly treat the entire face. You can treat the whole face in less than five minutes." The pulsed dye laser (585-595nm) with a 10-12mm spot size or IPL are other options for diffuse erythema.

Lasers can eradicate background erythema or telangiectases for a better appearance and reduction in symptoms, including decreased sensation of warmth with flushing and a reduction in acne-like lesions. Targeting of underlying vasculature provides long-lasting but not permanent effects, Dr. Kauvar says. Patients should expect to undergo maintenance treatments at intervals in the future.

As noted, Dr. Kauvar does not view laser therapy as a second-line intervention for erythema associated with rosacea, therefore her patients need not undergo a trial of topical or systemic therapy prior to

Take-Home Tips. Laser and light sources (KTP, PDL, IPL) effectively reduce erythema, remove telengiectases, and reduce symptoms of flushing and blushing with a series of treatments. Laser therapy can also improve photodamage, sun spots, and pigmented scars. Lifestyle modification (regular and proper sunscreen use, exercise, stress reduction, reduced alcohol and caffeine consumption, etc.) is essential to therapeutic success. Standard adjunctive therapies (topicals and oral) may be indicated for the papular/pustular component of rosacea. Cosmeceuticals can help to reduce erythema, repair the epidermal barrier, and improve photodamage. ●

receiving laser treatment. As a practical matter, however, she observes that many patients have tried standard treatments in the past with suboptimal results. Standard treatments may be useful to reduce or prevent the papular/pustular component of rosacea in prone patients even after laser treatment.

In addition to improvement of erythema and telangiectasia, any of the lasers or light sources used for rosacea—KTP, PDL, IPL—are also absorbed by pigment, allowing for treatment of brown spots, sun damage, and pigmented scars. KTP can also be used for melasma, and Dr. Kauvar notes that treatment provides an improvement in overall skin texture and may help reduce the appearance of large pores. Many patients, therefore, receive full-face treatments and may even receive treatment of the neck and chest for a comprehensive cosmetic effect.

For patients with more advanced disease, infrared lasers can be used to target sebaceous hyperplasia, while management of rhinophyma requires a resurfacing laser, such as a CO_2 or erbium. Aside from other surgical procedures, there are no other treatments for phymatous formations.

Dr. Kauvar notes that rosacea worsens with age and cumulative sun exposure, therefore many patients present with common cosmetic concerns associated with photodamage and aging. As much as laser therapy can address these various concerns, it is a suitable choice for many rosacea patients. Additional cosmetic interventions, such as neurotoxins and fillers, may also be of interest to these patients. Sun protection and avoidance strategies, including use of a broad spectrum sunscreen, are essential for all rosacea patients to help prevent further cutaneous damage and prolong the effects of treatment.

"Lasers are a huge part of my treatment of rosacea," acknowledges Jeanine B. Downie, MD, Founder of image Dermatology in Montclair, NJ. However, she stresses that laser therapy is one part of an overall patient management approach. Among the lasers she uses to treat rosacea are the Vbeam Perfecta (595nm PDL, Candela), the Lyra (1064nm Nd:YAG, Iridex) and Aura (532nm KTP Laser, Iridex). All three lasers are able to treat vessels, background erythema, and brown pigmented lesions with no downtime and no purpura, she says.

Some Tips on Laser Adoption

Before offering laser therapy for rosacea in your practice, Dr. Kauvar recommends you:

- Go to laser courses and view live demonstrations.
- Get hands-on, in-office demonstrations involving *your* patients.
- Consider renting the specific laser you intend to purchase for a trial period.

Before initiating laser therapy, patients must understand that achieving optimal results will take time, Dr. Downie says. "I ask patients, 'How long did it take you to get this red?' and I explain that it's also going to take some time to reverse that damage," she says. She generally tells patients to expect to undergo six to 10 or more treatments before seeing satisfactory results, although she says the range may actually be from three to 20 treatment cycles, depending on the individual's initial condition and response to treatment. To help patients understand the benefits and realities of laser therapy, Dr. Downie directs them to the National Rosacea Society website (rosacea.org), which she says is very informative and provides before and after images for patient review.

"Patients very much push to go to lasers for rosacea," Dr. Downie observes, adding that treatment has benefits such as new collagen development, reduction of fine lines and wrinkles, and evening of tone, in addition to removal of broken vessels and background erythema. However, she warns, traditional therapies and lifestyle modification both remain important for her patients. "The first thing patients must do is use hypoallergenic, fragrance-free sunblock at least SPF 30 daily," Dr. Downie says, adding that all patients regardless of ethnicity or skin tone must reapply sunscreen every two hours. She recommends MD Forte or Alyria sunscreens, which tend to rub in very well and be cosmetically acceptable for multiple skin types. "If they're not willing to use sunblock, their rosacea is just going to get worse over time," Dr. Downie asserts.

Adjunctive topical prescription therapies to consid-

er are metronidazole 1% (Metrogel, Galderma) or azelaic acid gel 15% (Finacea, Intendis), according to Dr. Downie. She says she tends to favor azelaic acid, even though, "it can be a little more irritating." Adding an oil-free facial moisturizer helps improve tolerability, she says. For patients interested in cosmeceuticals, Dr. Downie recommends Revale Skin Intense Recovery (Stiefel) with 1.5% coffeeberry, which she says helps to reduce erythema. Incorporated antioxidants help improve tone and texture, and the formulation supports improved barrier function, which is important in rosacea.

Oral treatment options include anti-inflammatory dose doxycycline (Oracea 40mg, Galderma), standard doxycycline (Doryx 150mg, Warner-Chilcott or Adoxa 150mg, PharmaDerm), or low-dose minocycline (Solodyn 90mg, Medicis).

Lifestyle modification is essential, including more exercise and less coffee, wine, stress, and sun exposure, says Dr. Downie. Some rosacea patients resist exercise, arguing that it causes them to flush. Drinking ice water throughout a workout helps to "trick" the baroceptors that mediate blood pressure and will minimize flushing, Dr. Downie notes. With time, patients will develop tolerance to exercise and be less prone to flush and blush with exertion. If needed, advise patients to schedule time for relaxation in efforts to reduce stress. Explaining to patients the interaction of adrenal glands, endogenous hormones, cortisol release, and stress can help them recognize the importance of stress reduction and encourage compliance with relaxation.

A Nice Place to Start

While laser therapy for rosacea is quite effective and Dr. Kauvar says it is "extremely satisfying" to be able to provide patients treatment, she says it may not be a good fit for all practices. "Look at your practice demographics," she suggests. "If a large component of your practice includes individuals with rosacea, this could be a nice place to start in terms of adopting laser treatment modalities." As a final pearl to dermatologists, Dr. Downie recommends aggressive treatment of spider hemangiomas, which can be precursors of rosacea. ■

Update on Laser Treatment of Acne

Generally, lasers are effective for acne that is papular/pustular, rather than characterized by cysts, blackheads, and whiteheads. Lasers are also useful for acne-associated hyperpigmentation (when the skin becomes slightly darker than one skin shade), according to Dr. Downie. Laser therapy likely provides benefit through multiple mechanisms, including decreasing *P acnes* colony counts, reducing erythema, and decreasing hyperpigmentation. Combined with standard topical therapies, laser therapy offers important benefits for most patients with papular/pustular acne, and Dr. Downie says about two-thirds of her patients are very happy with laser treatments.

For patients with primarily papular/pustular acne who develop occasional acne cysts, intralesional injections are indicated. For patients with acne that has a significant cystic component, lasers usually are not first-line treatment options, but they can be useful for patients who refuse systemic antibiotics or isotretinoin, Dr. Downie says. Fraxel re:store (Fractional CO_2, Thermage) may be appropriate for patients with cystic acne scarring, and Dr. Downie says that she does not hesitate to treat scarring in patients with active acne. Having a personal history of bad but non-scarring acne, Dr. Downie says she understands the effect it can have on patients. "I don't want patients to have to get worse while waiting for cysts to resolve," she explains. So she treats aggressively. Typical skin care following fractionated resurfacing includes Biafine (Ortho-Dermatologics) and a hydroquinone. Because these can be irritating for patients with cystic acne, Dr. Downie usually decreases the application of Biafine and incorporates a strong topical retinoid, such as tazarotene (Tazorac, Allergan).

Treating active scarring acne is necessary not only to help reduce scar formation but because of other important effects. As Dr. Downie explains, when the patient feels he or she is "doing something" about scarring, he or she feels more in control, which may lead to decreased stress hormone and possibly an overall better sense of the self. When the patient *feels* better, he or she may start to get better, she says.

Because patients may have a tendency to underestimate improvement, and because results may be subtle, Dr. Downie recommends taking images before starting laser therapy in any patient and taking additional photos after each treatment.