Lasers for Facial Dermatoses: Acne and Rosacea

A look at the types of laser and light therapies that are effective and the results patients can expect.

BY NANCY J. SAMOLITIS, MD

The gold standard in terms of laser therapy for treating the redness associated with rosacea or the redness associated with pimples or erythematous scars for acne patients is the vascular laser. The most commonly used vascular lasers include the pulsed dye laser and KTP laser. I have traditionally used a pulsed dye laser for several years, but our office recently added a new KTP laser, which I really like for treating redness. It’s fast, versatile, and easy to use.

DIMINISHING REDNESS

Rosacea is a chronic inflammatory condition that is usually controlled with oral and topical medications. When a patient has inflammatory lesions under control but still suffers with persistent erythema and visible telangiectasias, laser therapy may be the best option. Laser therapy in itself does not alter the pathogenesis of rosacea, but treatment with these devices can help patients to cosmestically diminish redness. In addition to reducing background redness and flushing, treatment can also effectively reduce visible telangiectasias.

When treating patients with a vascular laser to reduce redness, the treatment protocol typically requires a series of three to four treatments about a month apart and then maintenance treatments every six to 12 months. Maintenance can also be achieved by controlling the inflammatory component of rosacea with traditional medications and avoidance of rosacea triggers, such as sun and heat. Daily sun protection is essential post-therapy.

There is usually little downtime associated with vascular laser treatment. Some patients can experience swelling and more redness right after treatment. Occasionally, a patient may experience some more dramatic swelling that could last four to five days. We often find, however, that the patients who experience more significant swelling and redness or who are willing to undergo more aggressive treatment initially have better overall outcomes.

Vascular lasers are not typically recommended for darker skin, including skin types IV and darker because of the affinity of the wavelength for melanin. If treatment is performed on a patient with darker skin, extreme caution and lower energy settings must be used. These patients may have less dramatic results or require more treatments.

TARGETING ACNE FLARE-UPS

Blue and red light can be used to treat acne. Patients are treated for 20 minutes twice per week for up to three months—we typically alternate therapy with blue and red light. Blue light targets the porphyrin produced by Propionibacterium acnes, causing destruction of the bacteria associated with acne outbreaks. Red light has anti-inflammatory and collagen-stimulating properties, making it useful in treatment of acne and early acne scarring.

The schedule for maintenance treatments after initial therapy varies from patient to patient—some come back monthly and others every three months. The results are not long-lasting, but are effective at controlling flares. Light therapy is typically suggested to patients who are having a sub-optimal outcome with typical topical and oral therapies. We rarely use light as monotherapy unless the patient is pregnant or has an intolerance or allergy to topical and oral acne medications.

There is no downtime that results from treatment, but treatment is time-consuming and requires a significant commitment from the patient to visit the office frequently for the initial therapy, so it’s important for patients to have realistic expectations about the outcome of therapy. There are also

(Continued on page 30)
some available handheld red and blue light devices for home use that are reported to be effective if used frequently and properly.

Another effective option is to apply a photosensitizer before the patient goes under the light, a procedure known as photodynamic therapy. At our office, we most commonly use 5-aminolevulinic acid (ALA) (Levulan) by applying it for 30 to 60 minutes prior to exposure to light. Application times may vary and many studies have been done looking at pros and cons of longer and shorter contact duration times. Using the photosensitizer really amps up the effects of the light therapy on the acne. Patients must be warned that they will experience sun sensitivity for 48 hours, and could experience possible swelling, crusting, and peeling.

THE RIGHT PATIENTS FOR THERAPY

Patients need to be motivated to be good candidates for laser and light therapies for acne and rosacea. It does require a commitment to frequent office visits initially and follow-up for maintenance. Also, these treatments are not covered by insurance, so there is a financial commitment as well. In our office, we treat many teens with acne. Having light therapy in the office along with peels and/or acne surgery may help them to see a faster improvement in their appearance and may enhance their overall compliance with acne treatment. Vascular laser therapy is most popular with adult females who suffer from rosacea or erythema from photodamage. Most vascular lasers can also improve skin texture, lentigines, and other features of photodamage.

(Continued from page 28)

Practical Pointer

When a rosacea patient has inflammatory lesions under control but still suffers with persistent erythema and visible telangiectasias, laser therapy may be the best option. Laser therapy in itself does not alter the pathogenesis of rosacea, but treatment with these devices can help patients to cosmetically diminish redness.

Dr. Nancy Samolitis is a Board Certified dermatologist with specialized training in cosmetic dermatology. She specializes in treatment of aging and sun-damaged skin on the face and body. Dr. Samolitis has lectured nationwide and has authored several peer-reviewed journal articles and textbook chapters. She has received a research grant award from the National Rosacea Society for the development of a project studying the effects of lasers and light therapy on rosacea. She is a fellow of the American Academy of Dermatology and the American Society of Dermatologic Surgery.