

Inform patients of risks

Communication Combats Laser Complications

Sharon Worcester

Tallahassee Bureau

FORT LAUDERDALE, FLA. — Laser skin resurfacing is less operator-dependent than some other treatment modalities, but troublesome complications can occur nonetheless.

Careful attention to a number of variables before, during, and after surgery can reduce the risk or severity of complications, and in most cases, treatments are available to help resolve adverse effects, Joseph **Niamtu** III, D.D.S., said at the annual meeting of the American Academy of Cosmetic Surgery.

Some of the most common complications from laser resurfacing are:

► **Postoperative erythema.** This is the most common complication associated with laser resurfacing. Risk increases with multiple passes, stacking of pulses, and aggressive debridement of char between passes, said Dr. **Niamtu** of Richmond, Va.

Postoperative wound infection and dermatitis will also exacerbate erythema; this can be a particular problem in patients with rosacea. Preoperative treatment with tretinoin is helpful for prevention, and recent studies suggest that topical vitamin C is useful as well. Corticosteroid use is controversial, but short courses of weaker corticosteroids may make a difference, he said.

► **Hyperpigmentation.** Most patients ignore advice about avoiding the sun, so hyperpigmentation is a common result. Some patients get blotchy hyperpigmentation while others get a more generalized reaction. Fortunately, it is only temporary. In patients with hyperpigmentation, repeat warnings about avoiding sunlight—including in colder months—and advise patients that even fluorescent overhead lighting can exacerbate the problem.

Begin the patient on whatever cosmeceutical products you prefer, try light skin peels if necessary, and promote the use of sunscreen. Hyperpigmentation is often an inflammatory process, so avoid products or procedures that cause additional inflammation, Dr. **Niamtu** said.

► **Hypopigmentation.** This severe and largely irreversible complication can occur as late as 2 years following laser resurfacing. Overtreatment is usually the cause, but there are some patients who seem to be predisposed to hypopigmentation. It occurs most often in those with darker skin.

Some experts advocate the use of gradual ultraviolet light exposure, light peels, and skin creams to blend skin color, but the condition is generally considered permanent. Some lightening of the skin is normal in all patients undergoing laser resurfacing, so patients should be told to expect this.

► **Acne flare.** Flares occur more often with the use of occlusive dressings and ointments. Flares usually resolve spontaneously, but a short course of tetracycline, minocycline, or topical antibiotics after reepithelialization may be warranted.

► **Contact dermatitis.** In some studies, up to 65% of laser resurfacing patients experienced contact dermatitis. Use of fragrances, Neosporin, soaps, moisturizers, and cosmetics can contribute. Diffuse erythema and pruritus are common with contact dermatitis, and class I topical steroids and oral antihistamines will speed resolution and reduce the risk of scarring. Oral corticosteroids may be required in severe cases. Making patients comfortable is an important aspect of care.

► **Postresurfacing herpetic lesions.** This is a rare but serious complication. Consider consulting an infectious disease specialist. Since the epithelium is gone, blistering may not occur; in some cases the only presenting symptom will be early postoperative pain, so think of herpes infection in patients who complain of pain.

► **Bacterial infection.** *Staphylococcus aureus* and *Pseudomonas* species are the most common organisms isolated in patients with bacterial skin infections following resurfacing. Signs of infection, a relatively rare complication, include erythema, pain, discharge, and erosion.

Minor infections generally resolve on their own, but broad-spectrum antibiotics can be used. For prevention, advise patients to wash their hands before washing their face and to avoid using washcloths, which can harbor bacteria.

“Some people tell patients not to use tap water, but I think that’s overdoing it,” Dr. **Niamtu** said.

► **Hypertrophic scarring.** Significant scarring is a serious concern. It usually results from overtreatment and occurs most often along the mandibular border. Early treatment is imperative. Intralesional triamcinolone and topical steroids are useful. It’s a good idea to consult with someone experienced in dealing with this complication, Dr. **Niamtu** said.

It’s always better to prevent complications than to treat them, and since patient compliance is a factor in the outcome of resurfacing, explain carefully what is expected of the patient.

Don’t be afraid to discuss complications, and even consider showing photographs of possible complications so that patients are fully informed of the risks.

Relative hypopigmentation is not a complication but a visual difference between treated and nontreated skin.



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True hypopigmentation is rare but permanent. It is associated with overtreatment. *Photos Courtesy Joseph Niamtu III, D.D.S.*



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