

Summary and Comment

Photorejuvenation: It Really Works

Nonablative skin resurfacing, or photorejuvenation, is one of the hottest topics in cosmetic dermatologic surgery. This approach is based on the concept that gentle application of a variety of wavelengths in the visible and infrared spectra stimulates new collagen and perhaps produces new elastic fiber that rejuvenates photoaged skin. The big question is whether these techniques really work. French investigators evaluated the efficacy of a 1540-nm Er:glass laser in 60 subjects (mean age, 47) with skin types I to IV. Four treatments were performed in the periorbital and perioral skin at 6-week intervals. Patients reported their satisfaction with results, and objective evaluations were performed using digital photographs, ultrasound imaging, and skin-texture analysis by profilometry of silicone imprints.

Fifty-two patients completed the study and were examined 6 weeks after the fourth treatment. Contact cooling during treatment made the procedure entirely pain-free in all but 2 individuals. No adverse effects were reported. At the final follow-up visit, all patients were pleased with the results: 61% had scores of 3 or 4 on a 4-point self-evaluation scale, with 4 representing "very satisfied." Silicone imprints revealed a 40% reduction in wrinkle texture, and ultrasound imaging demonstrated a 17% increase in dermal thickness. Biopsy specimens demonstrated evidence of a new Grenz zone of dermal collagen.

Comment: Many evaluations of photorejuvenation techniques are underway; this is one of the first to be published. It is clear from this large, well-done study that the 1540-nm Er:glass device improves skin texture on subjective and objective measures and that the procedure is extraordinarily well tolerated. Although the degree of improvement doesn't match the degree achieved with laser skin resurfacing, the results are promising and the procedure is much better tolerated. Though nonablative skin resurfacing has been met with skepticism, this study is an important step toward the acceptance of a new approach to skin rejuvenation.

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