PROVEN EFFECTIVE FOR TREATING MELASMA AND ACNE SCARRING IN ALL SKIN TYPES

A new aesthetic device, the Fraxel® SR Laser from Reliant Technologies (Palo Alto, CA) is showing great promise in treating two therapeutically resistant skin conditions, melasma and acne scarring. To provide evidence of the clinical efficacy of this new treatment, my colleagues and I have conducted two separate clinical studies using the Fraxel laser.

OVERVIEW – MECHANISM OF ACTION

Fractional resurfacing employs a new concept where microscopic points of light pass through the stratum corneum and are deposited among normal, healthy tissue. There is no post-op wound care as the skin’s outer layer is left intact, resulting in little to no downtime for the patient. The Fraxel laser’s uniform microthermal treatment zones can reach depths of up to 1 mm, affecting both epidermal and dermal tissue. The coagulated tissue flakes off over a period of 5-7 days. Histological slides utilizing elastin stains have proven the existence of dermal material in the exfoliated skin. We hypothesize this is the reason why fractional resurfacing is successful in treating both epidermal and dermal conditions, such as melasma and acne scars.

CLINICAL INVESTIGATION

Melasma is a stubborn pigment disorder which has been nearly impossible to treat with traditional light modalities and chemical peels due to the risk of further dyspigmentation, especially in darker skin types. In our pilot study, we examined the effects of fractional resurfacing using the Fraxel laser in treating 10 patients with facial melasma, all with Fitzpatrick skin types III-IV. Patients and study investigators reported 75-100% improvement in 50-60% of the patients. The Incidence of Post Inflammatory Hyperpigmentation was 10% in this study which can generally be improved with adjunctive bleaching regimens.

Acne scars have been a challenge to treat with the traditional ablative techniques due to the depth of the scars and risk of hypo/hyperpigmentation associated with CO₂ laser resurfacing. We studied 17 patients, Fitzpatrick skin types I-V, treated with the Fraxel laser for acne scars. Three categories of scars were treated: boxcar, rolling, and ice pick. All types responded to the procedure, with patients and investigators reporting an average of 50% improvement in the surface texture, color, and volume of the scars following fractional resurfacing. This is a significant increase over improvement scores related to other non-ablative therapies.

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people with darker skin types. This laser treatment can safely be combined with other surgical modalities such as punch excisions, dermal grafts, and subcision for enhanced results. For melasma, I combined the Fraxel laser with a bleaching regimen beginning 2-3 weeks before the procedure and continuing post-treatment. In both cases, strict sun protection is essential to preserve the results of fractional resurfacing.

In summary, my patients are extremely pleased with the improvement in texture, color, and deep dermal remodeling with Fraxel laser treatment. Practicing in New York City, my patients have active work and social lives, and demand procedures which do not interrupt their busy schedules. The Fraxel laser provides tangible, measurable improvements to patients of all skin types with minimal downtime.

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— Cameron K. Rokhsar, M.D., F.A.A.D., F.A.A.C.S.

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Cameron K. Rokhsar, M.D. is a board certified dermatologist with a special interest in cosmetic dermatology and surgery. After graduating from Harvard University, Dr. Rokhsar attended The New York University School of Medicine, where he received his doctorate of medicine. After an internship at Lenox Hill Hospital in New York City, he completed a dermatology residency at the Albert Einstein College of Medicine in New York City, where he served as a Chief Resident. Dr. Rokhsar went on to receive fellowship training in cosmetic, laser and dermatologic surgery in San Diego.

Dr. Rokhsar was one of the first to introduce Fraxel laser technology to the world medical community and has lectured on this subject numerous times to groups including Controversies and Conversations in Laser Surgery, American Society for Lasers in Medicine and Surgery, American Society for Dermatologic Surgery and the American Academy of Cosmetic Surgery.