



Laser Treatment for Acne Scars with Fractional Er:YAG and Nd:YAG Laser

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Introduction:

This bulletin presents two cases. The first case is a 27-year-old female with an acne history on the face that was treated with Isotretinoin over 10 years ago, with a total resolution of the active lesions that left her with multiple scars. At the time of the treatment, she was using topical treatment such as retinoids and photoprotection. The second case is a 33-year-old female with a history of facial acne, which resolved when she was 20 years old with contraceptive pills (that she still uses as maintenance), with no topical treatment at the moment. We created a protocol treatment to improve any type of acne scar, shown in the table above.

No skin preparation was required. The procedure with the SP Dynamis laser system was performed with infiltrative anesthesia with lidocaine, and consisted of 4 steps.

Laser	SP Dynamis			
	Step 1	Step 2	Step 3	Step 4
Wavelength	1064 nm (Nd:YAG)	2940 nm (Er:YAG)	2940 nm (Er:YAG)	2940 nm (Er:YAG)
Handpiece	R33-T	R11	FS01	FS01
Fluence	45-55 J/cm ²	4 J/cm ²	108 J/cm ²	44 J/cm ²
Mode	FRAC3	MSP	LP, Turbo 6	XLP
Pulse duration	0.6			
Frequency	6 Hz	1 Hz	1 Hz	5 Hz
Passes	8-10	1	2	6
Spot size	4mm	3 mm	N/A	N/A



Drs. Julio and Sebastian Velez are Colombian dermatologists who graduated from Universidad del Bosque and University Foundation for Health Sciences respectively. They are committed to research and education, performing as adjunct professors at the Del Rosario University and the Universitaria Sanitas Foundation. They currently work with SP Dynamis Pro and StarWalker MaQX systems in their private practice, Medical Art. They also provide pro bono services at the University Hospital Federico Lleras Acosta Dermatological Center.

CLINICAL CASE:

The first step achieves a reduction in the production of cytokines and control the inflammation. The fluence depends on the patient's phototype, lower fluence is used for higher Fitzpatrick skin types. Between 8 to 10 passes are applied on the full face with a homogeneous application, non-stacking, with either a horizontal, vertical or crisscross pattern with no overlapping. Second step is done in order to polish the shoulders of the scar; a mild pinpoint bleeding is the endpoint. Fractional ablation for deep scars (third step) and superficial scar (fourth step) is performed in the end. It is important to make subcision treatment prior to each laser session with patients that have deep retractions (retinacula cutis scars).

After the procedure, erythema and small scabs should be expected for at least 7 days. Sunscreen protection should be restarted immediately after the treatment and topical treatments can be started after 2-3 days. Four sessions with monthly intervals are required to see the best results.



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