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Er:YAG Laser for Acne Scars

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Parameters:

Laser source:	Er:YAG (Full spot)	Er:YAG (Fractional)
Pulse duration:	MSP	MSP
Fluence:	4 J/cm^2	55 J/cm^2
Mode:	Basic	Turbo2
Frequency:	8-10 Hz	40 Hz
Handpiece:	R11	F-Runner
Spotsize:	2 mm	10% coverage

Treatment procedure:

Acne scars may form as a consequence of inflammatory processes involved in acne vulgaris, but inflammation is not the only prerequisite for their formation – tissue regeneration capabilities also play a major role.

For many years lasers have played an important role in the treatment of acne scars. In order to achieve the best results, they should be used in combination with other treatment modalities.

The Er:YAG 2940 nm laser wavelength is highly absorbed in water. The Er:YAG laser is the most versatile tool compared to other lasers for skin ablation, since cool ablation with minimal heat dissipation as well as very hot ablation can be achieved by alternating the pulse duration. Both modalities have advantages, depending on what the goal is, whether it is avoiding the risk of postinflammatory hyperpigmentation, low downtime or stimulation of collagen remodeling. The objective of laser treatment is to cause controlled damage to the tissue in order to remodel the surface and at the same time exploit dermal and epidermal tissue regeneration capabilities and collagen remodeling.

We present a case where after just one laser treatment, and without applying any other treatment modalities, a marked improvement of acne scars was observed. We used the SP Dynamis laser (Er:YAG) with F-Runner fractional scanner (55 J/cm2 fluence, 10% coverage) as well as the R11 handpiece (4.0 J/cm2 fluence and 2 mm spotsize).

Before treatment

After 1 treatment