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Multimodal laser treatment for active acne with Nd:YAG and Er:YAG Laser

Julio Cesar & Sebastián Vélez Ocampo

Parameters:

Step	Step 1	Step 2	Step 3
Pulse duration	Er:YAG MSP	Nd:YAG VERSA	Nd:YAG FRAC3
Pulse Mode	Turbo 3	Basic	Basic
Fluence	210 J/cm ²	45-55 J/cm ²	15 J/cm ²
Frequency	1 Hz	1,8 Hz	3 Hz
Handpiece	R08-Ti	R33-T	R33-T
Spotsize	0,4 mm	4 mm	4 mm
Passes	1	3	10

Treatment procedure:

This case presents a 19-year-old transgender woman with a 3-year history of acne on the face and multiple oral and topical treatments, such as topical and oral antibiotics, retinoids and benzoyl peroxide, with improvements only sustainable for short periods of time. Additionally, she was not interested in using isotretinoin because of the transition she was going through.

No skin preparation was required. Cooling was used throughout. At the time of the treatment the patient was not using any oral medication and was only using topical treatments with derma-cosmetic products. The procedure was performed with an SP Dynamis laser under topical anesthesia (lidocaine 20% + prilocaine 10% + tetracaine 5%), which was applied to the face 30 minutes before. The treatment consisted of 3 steps.

In the first step, 1 pass was performed over every closed comedone in order to open small holes and eventually facilitate deep comedone extraction and inflammatory lesion drainage, leaving mild pinpoint bleeding.

The second step used 3 passes directly over the affected pilosebaceous follicles in order to decrease local inflammation and produce thermal damage to the sebaceous glands. The applied fluence depends on the patient's phototype - 55 J/cm² for phototypes II & III, 50 J/cm² in phototype IV, and 45 J/cm² in phototype V.

In the third step 10 passes were applied on the full face to achieve a reduction in the production of cytokines and control of inflammation. The application should be homogeneous without stacking or overlap, with either a horizontal, vertical or crisscross application. The fluence should be increased 5 J/cm² with each session.

After the procedure, erythema and small scabs should be expected to last 7 days, and topical treatments can be started 2-3 days after treatment. 4 sessions every 2 weeks are required to see the best results. The after picture was taken 1 month after the final treatment and no recurrence has been detected after 1-year follow-up with topical dermo-cosmetic products for maintenance.



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Top three photos: Before treatment; Bottom three photos: 1 month after treatment.