



Effective Non-surgical Treatment with Nd:YAG and Er:YAG Lasers for Lower Eyelid Dermatochalasis and Eyebags

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Introduction:

Lower eyelid dermatochalasis and eyebags are both common concerns, especially among older patients. The usual advice that patients receive from doctors is to undergo lower blepharoplasty, however, the combination of Nd:YAG and Er:YAG laser provides patients with another effective, non-surgical approach to address the issue without any downtime and scars. This 54-year-old female came to the clinic with concern of droopy eyebags and lower eyelids, but she prefers something non-invasive.

Laser	Fotona EBD		
	Step 1	Step 2	Step 3
Wavelength	1064 nm	1064 nm	2940 nm
Handpiece	R33-T	R33-T	PS03X
Mode	FRAC-3	PIANO	SMOOTH
Pulse duration	0.6 ms	10 s	250 ms
Spot size	6 mm	9 mm	7 mm
Fluence	25 J/cm ²	250 J/cm ²	3.5 J/cm ²
Frequency	3 Hz		3.3 Hz
Passes	Multiple passes	Multiple passes	2-3 passes
Endpoint	Mild erythematous	Mild erythematous	NA
Anesthesia	Lower eyelid and eyebags	Lower eyelid and eyebags	Lower eyelid and eyebags
Sessions	1 session		



Dr. Wong Yeut Sun completed his medical training at the National Defense Medical Center in Taipei, Taiwan in 2011. From 2011 to 2013 he performed internships in the Dermatology Department of Tainan ChiMei Hospital and the Plastic Surgery Dept. of Taipei Veteran General Hospital. After working as a Medical Officer at the Sungai Buloh and Tawau hospitals, he began his current position in 2017 as an aesthetic physician in the Davinci Clinic at the National Taiwan University Hospital in Taipei.

CLINICAL CASE:

Safety precautions such as eye shield protection were used in this case and the under-eye area was pulled inferiorly as much as possible while emitting the laser at that area. All the steps were being done transcutaneously.

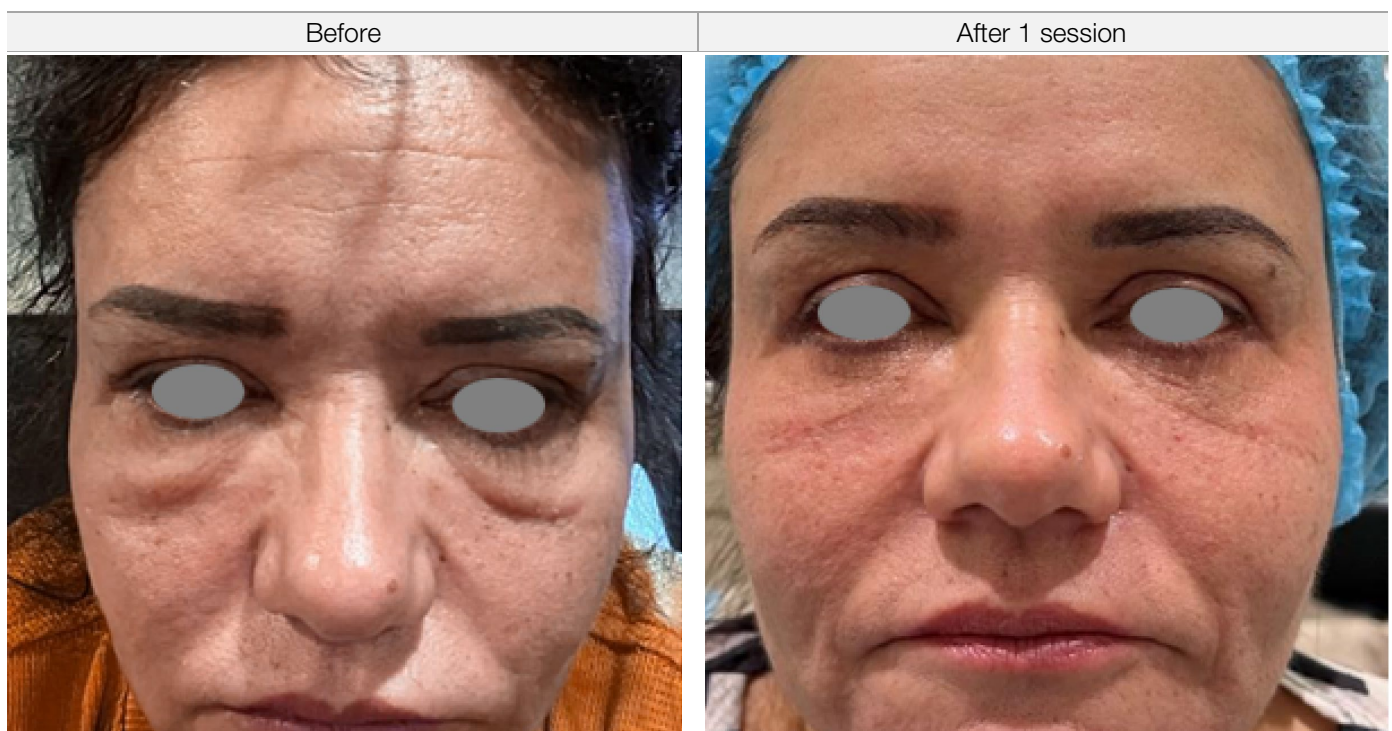
EMLA cream was applied for 40 minutes on the area of interest prior to the treatment. The first step of treatment was to target the eyebags area by using FRAC3 mode, spot size 6 mm, fluence 25 J/cm² as shown in the table. Multiple passes were done with an objective to keep surface temp hovering at 40 °C for around 3 minutes, separated evenly for both eyes. The pain from the laser was reported as moderate by the patient and was tolerable. The endpoint was erythema of the area involved.

The second step of treatment was to target the same area with PIANO mode, spot size 9 mm, fluence 250 J/cm² with multiple passes. We utilized the timer on the top right of the screen to perform this second step for 8 minutes, also ensuring the temperature hovered at 40°C The treatment time of 8 minutes was separated evenly for both eyes. The end point was mild erythema, and no pain was reported.

The last step was to target superficial skin texture by using Er:YAG mode with the PS03X, spot size 7 mm, fluence 3.5 J/cm² with 2-3 passes.

Moisturizer and sunscreen were applied to patient after treatment. The patient was advised to avoid long periods / extreme sun exposure.

The patient came back for a follow-up after 3 weeks and was satisfied with the results from only 1 session. No complications were observed. This showed that the combination of Nd:YAG and Er:YAG lasers is an efficient alternative way to deal with eyebags, without side effects and in a relatively short period of time.



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