



Treatment of centropacial melasma with picosecond Nd:YAG 1064nm laser in Fitzpatrick skin type IV patient

DR. Alyse Lim Hooi Xin

Introduction:

This report describes the clinical response of a type IV patient treated with a step-wise 1064 nm Nd:YAG protocol.

Laser	Starwalker PQX		
	Step 1	Step 2	Step 3
Wavelength	1064nm (Nd:YAG)	1064nm (Nd:YAG)	1064nm (Nd:YAG)
Handpiece	Black	Black	Black F9
Fluence	0.7 J/cm ²	1.2 J/cm ²	1.0 mJ/pixel
Frequency	5 Hz	5 Hz	5 Hz
Passes	5	5	5
Spot size	8x8 mm	6x6 mm	9x9 mm
Cooling	yes	yes	Yes
Anesthesia	no	no	no
Sessions	3 sessions with 1 month Tx interval		



Dr. Alyse Lim Hooi Xin is an Aesthetic Physician based in Penang, Malaysia. She obtained her M.B.B.S. degree from Cyberjaya University College of Medical Sciences (CUCMS). She was a former medical officer in an emergency department before enrolling in the aesthetic field. She is committed to using lasers for skin rejuvenation and pigmentation, and currently works with the Fotona SP Dynamis and Fotona StarWalker PQX lasers at her practice center.

CLINICAL CASE:

Melasma poses a significant challenge in dermatology due to its chronic nature and the need for long-term management to prevent progression and recurrence. The visible nature of melasma on the face can lead to profound psychosocial impacts on individuals, affecting their self-esteem and quality of life. As such, individuals affected by melasma are often motivated to seek treatment not only to address the physical appearance of the condition but also to improve their overall well-being.

A 42-year-old Indonesian female presented with melasma affecting her entire face for a few years. She expressed frustration as the discoloration on her face was getting darker over the years. A treatment protocol using the Fotona StarWalker PQX laser was selected for her.

Protocol / Procedure:

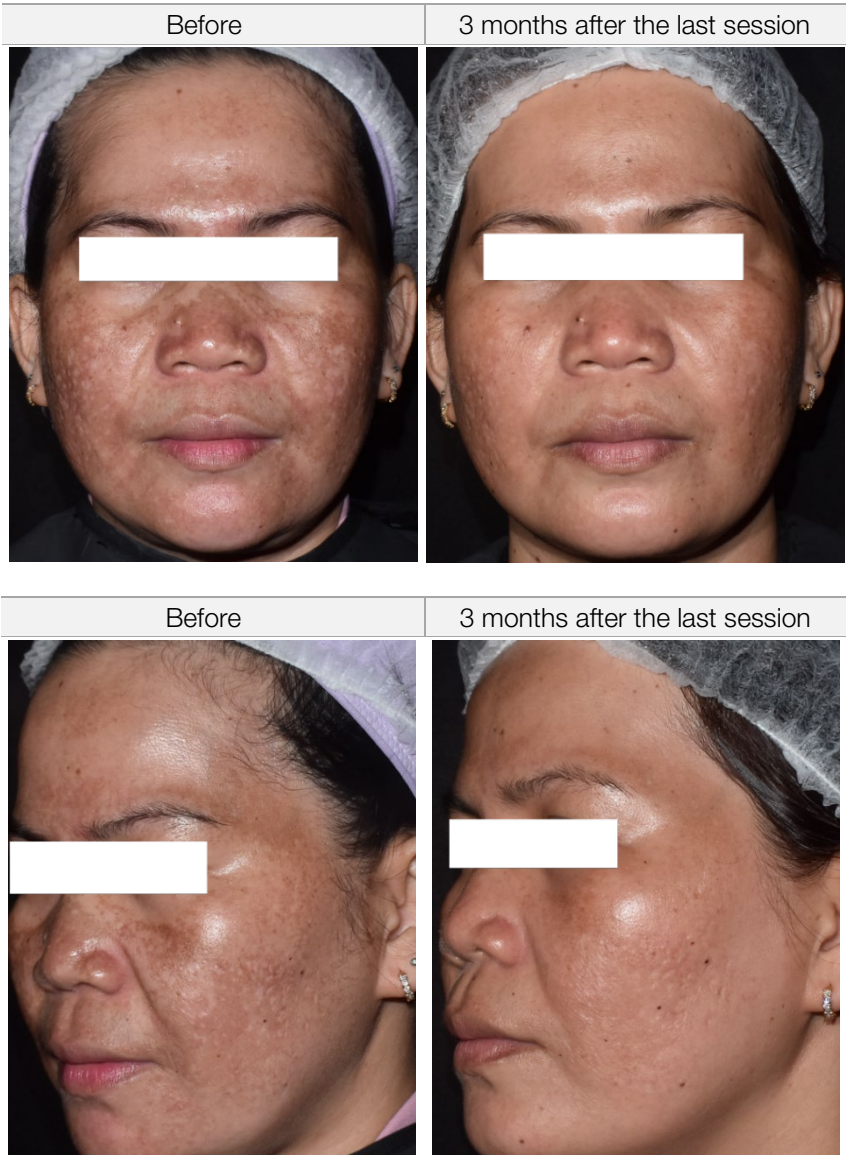
Each laser session consists of 3 steps. The first step of the treatment is a laser-painting treatment with the black handpiece (8 mm), 5 passes all over the face. Two different spot sizes were used (8 mm then 6 mm) to target pigmentation at varying depths for more complete pigment fragmentation. The same step is repeated using the black handpiece (6 mm), with fluence adjusted accordingly for depth-appropriate energy delivery while maintaining safety.

The final step involves using the black F9 handpiece, 5 passes all over the face, performed at low fluence to provide gentle rejuvenation while avoiding inflammation that could worsen melasma. The end point of the laser treatment is minimal redness. The laser treatment is done concurrently with an air cooler to reduce pain as well as to reduce thermal injury from the laser. A total of 3 sessions of laser treatment at one-month intervals was performed for this patient.

Result & Discussion:

Based on the clinical appearance of the skin discoloration, this is melasma with centrofacial distribution. Following the laser treatment, there was no noticeable skin dryness or redness. The patient was advised to apply adequate moisturizer and sunscreen. She was started on hydroquinone 4% in the morning and Tri-Luma (hydroquinone 4%, tretinoin 0.05%, fluocinolone 0.01%) at night following the laser treatment. These topical agents were initiated after the first laser session, starting about one week post-treatment to minimize irritation or PIH risk.

Noticeable improvement of melasma was observed after 3 sessions of laser treatment. Proper usage of sunscreen is emphasized to prevent any rebound of melasma. Subsequent follow-up at 3 months after the 3rd session showed stable melasma.



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