Multi-Modular Nd:YAG Laser as an Effective Acne Treatment

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Introduction:
Acne vulgaris is a common skin disease among teenagers and young adults, who experience a surge of growth hormone that leads to hyperactive sebum production that may be accompanied by acne breakouts. Although laser is not the first-line treatment for acne vulgaris, it has proven to be an efficient and quick way to control the inflammation and lighten the post-inflammatory hyperpigmentation (PIH) from acne. The case and photos below represent a series of patients who underwent only laser treatment for their acne conditions.

Laser	Fotona StarWalker		
	Step 1	**Step 2**	**Step 3**
Laser Model	StarWalker MaQX	StarWalker MaQX	StarWalker MaQX
Wavelength	Nd:YAG (1064 nm)	Nd:YAG (1064 nm)	Nd:YAG (1064 nm)
Handpiece	R28d	R28d	R28d
Mode	FRAC-3	VERSA 3-25 ms	MaQX-1
Spot size	4 mm	4 mm	7 mm
Energy / Fluence	35 J/cm^2	25 J/cm^2	2 J/cm^2
Frequency	1 Hz	1 Hz	10 Hz
Passes	2-3 passes on spot	2-3 stacking on acne	Multiple passes
Endpoint	Mild erythema	Erythema on lesion	Lightening of PIH
Anesthesia	-	-	Cool air
Target	Opens pores	Acne	Whole face
Sessions	1		

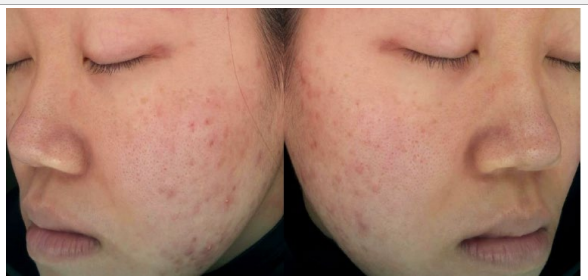
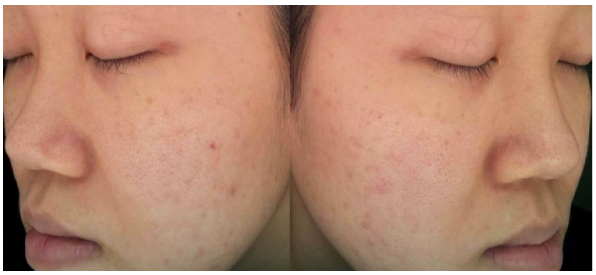
Dr. Wong Yeut Sun earned his postgraduate degree in dermatology. He is a specialist in laser treatment and is well trained in local anesthesia. His practice is based at the Da Vinci Clinic in Kuala Lumpur, Malaysia. He is a self-motivated learner who constantly attends professional conferences to keep himself up to date with the latest advancements in the field of aesthetics.

CLINICAL CASE:

The first step of treatment was to target the open pores area by using FRAC3 mode with a spot size of 4 mm and fluence of 35 J/cm^2 as shown in the table. 2 to 3 passes were done especially on the areas where open pores and oily skin were noted. The pain from the laser was reported as mild by the patients and was tolerable. The endpoint was mild erythema of the area involved.

The second step of the treatment was to target the active acne by using VERSA 3-25 ms mode with a spot size of 4 mm and fluence of 25 J/cm^2, with stacking 3 times. The endpoint of erythematous changes was noticed. The last step was to target the PIH with MaQX-1 mode, spot size 7 mm, and fluence 2 J/cm^2 with multiple passes. Cool air was used during this step to mitigate the pain from the laser. Lightening of the PIH was observed. Moisturizer and sunscreen were applied to the patients after treatment. Advice for the patients was to avoid long periods of extreme sun exposure.

The patients returned for follow-up after 1 month and were satisfied with the results. No complications were observed. However, new acne and comedones were noted, but the degree of breakout was reported to be less than before. This showed that long-pulsed Nd:YAG laser does provide an efficient way to reduce acne inflammation without side effects in a relatively short period of time.

Before	After 1 session
	
Before	After 1 session
	
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