

Thesis Title	A Comparative Study on the Efficacy of Fractional Q-switched Nd:YAG Laser Versus Low-Fluence Q-Switched Nd:YAG Laser for Facial Melasma in Thai Females
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ABSTRACT

Background: Low-fluence 1064 nm Q-switched Nd:YAG laser has recently been shown to be effective for the melasma treatment.

Objective: The purpose of this study was to compare collimator mode to fractional mode to evaluate the clinical efficacy and safety of low-fluence 1064 nm Q-switched Nd:YAG laser treatment of melasma in Thai females.

Methods: Eighteen patients with melasma underwent 16 weeks of twice a month treatments, using a Q-switched Nd:YAG laser (Helios II by LASEROPTEK) with parameters set for 750 mJ, piece 8 mm (1.95 J/cm^2), repetition rate 10 Hz, 2 passes for collimator mode and 850 mJ with fractional handpiece (3.4 J/cm^2) repetition rate 3 Hz, minimal overlapping, 2 passes for fractional mode. Patients and investigators evaluated the intensity of pigmentation by using MASI score and melanin index every 4 weeks and followed up at 4 weeks after complete 6 sessions of treatments. The objective assessment was also performed with VISIA and Mexameter tool.

Results: The result also revealed that there was constantly decreased MASI scores and melanin index after each treatment interval for all age groups during the course of 12 weeks treatment. Treatment was most effective on week 12 for all age groups. MASI scores and melanin index are rebounded after treatment termination on week 16, but still considerably lower than the mean MASI score and mean melanin index before recorded treatment at baseline. None of the 18 patients showed any signs of severe side effects during the course of the treatment.

Conclusion: Collimator and fractionl mode of low-fluence 1064 nm Q-switched Nd:YAG laser had no difference on the efficacy and both are effective to treat melasma without serious side effects.

Keywords: Low-Fluence 1064 nm Q-switched Nd:YAG Laser/Melasma/Collimator Mode/
Fractional Mode