

**ACOS23P-004: Safety and Efficacy of Combination 10 sessions of Q-switched Nd: YAG 1064nm and Pulsed Dye Laser 595 nm on the Chinese female patient with a hyperpigmented skin lesion.**

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Melasma is an acquired disorder of facial symmetrical hyperpigmentation due to multiple photomechanical factors. Evidence suggests that effective treatment for melasma should address both hyperpigmentation and vascular anomalies to overcome therapeutic efficacy and safety issues. This study aimed to evaluate the safety and effectiveness of a combination therapy for treatment of melasma involving Q-switched Nd: YAG 1064 nm and Pulsed Dye Laser 595 nm among Chinese population with Fitzpatrick skin phototypes III-IV. A retrospective study was conducted involving twenty-seven Chinese female patients associated with melasma. They underwent ten sessions of a combination treatment at three-week intervals from January to December 2022. Two groups of credentialed doctors assessed the clinical photography to evaluate the mMASI score at the first (1<sup>st</sup>), fifth (5<sup>th</sup>), and tenth (10<sup>th</sup>) treatment sessions. Result and Discussion: Statistical analysis revealed a significant effect of the combination treatment on mMASI scores across the visits,  $F(1.62, 43.60) = 24.24$ ,  $p < 0.001$ , partial  $\eta^2 = 0.47$ . The study demonstrated a reduction in the mean mMASI Score across visits, from the 1<sup>st</sup> visit ( $8.74 \pm 2.95$ ), 5<sup>th</sup> visit ( $6.33 \pm 2.60$ ), and 10<sup>th</sup> visit ( $6 \pm 3.21$ ). There was a significant difference between the 1<sup>st</sup> and 5<sup>th</sup> visit ( $p < 0.001$ ) and between the 1<sup>st</sup> and 10<sup>th</sup> visit ( $p < 0.001$ ). However, no significant difference was observed between the 5<sup>th</sup> and 10<sup>th</sup> visits ( $p > 0.05$ ). The majority of patients did not show any adverse reactions to the treatment ( $n=19$ , 70.4%), and only the minority of them demonstrated redness ( $n=1$ , 3.7%) and hyperpigmentation ( $n=7$ , 25.9%) following the combination treatment. This study concluded that the combination therapy involving 10 sessions of Q-switched Nd: YAG 1064nm and Pulsed Dye Laser 595 nm is effective and safe for treating melasma among Chinese female patients with Fitzpatrick skin phototypes III-IV.

**Keywords:** Chinese, Female, Melasma, Pulsed Dye Laser 595nm, Q-Switched Nd: YAG 1064nm, Combination Treatment, Ten Sessions