Clinical experience with a new picosecond alexandrite laser for treatment of refractory melasma in Fitzpatrick skin phototype IV and V Thai patients.

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BACKGROUND: In 2020, picosecond alexandrite laser with diffractive lens array had been reported to be moderate effective for the treatment of refractory melasma by the author. Recent upgrading of this laser with higher pulse energy and adjustable fluence has been available.

OBJECTIVE: To evaluate the efficacy and safety of a new picosecond alexandrite laser in the treatment of refractory melasma in Fitzpatrick's skin phototype IV -V Thai patients.

METHODS: 20 cases of Thai patients wit Skin Phototype IV to V melasma (11, mixed and 9, telangiectatic type) received 3 bi-weekly treatments with a picosecond alexandrite laser using an adjustable fluence Diffractive lens array (DLA) 6 mm spot size, fluence of 0.8 J/cm^2 at 5 Hz.Non-overlapping tracing the lesions combined with DLA 8 mm spot size, fluence of 0.5 J/cm^2 at 10 Hz,non-overlapping for total 3-5 passes. Post-laser treatments were 3% Transamin cream and broad-spectrum sunscreen.

Melasma Severity Index (MSI scores) were performed before and after three months by the three authors using standardized digital photographies.

RESULT: After three months, the mean MSI scores reduction was 61% . The pre treatment MSI was 16.7(+/-9.7 and the post treatment was 6.0(+/-4.1).,which was statistically different.(Wilcoxon test ,$p<0.01$). the quartile grading scale was 2.2 (+/-0.09).

CONCLUSION: The picosecond alexandrite laser with adjustable fluence DLA appears to be effective in treating refractory mixed and telangiectatic melasma in SPT IV-V Thai patients.