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: Nine cases of Thai patients with refractory melasma received 6 bi-weekly treatments with a picosecond alexandrite laser using an adjustable fluence Diffractive lens array (DLA) 6 mm spot size, fluence of 0.7-0.9 J/cm^2 at 5 Hz in combination with DLA 8 mm spot size, fluence of 0.4-0.6 J/cm^2 at 10 Hz, for total 3-5 passes. Post-laser treatments were emollient and broad-spectrum sunscreen.

Melasma Severity Index (MSI scores) were performed before and after three months by three authors.

RESULT: After three months, 6 cases (66.7%) had excellent results (>75% reduction of MSI scores) 2 cases (22.2%) had a good result (50-74% reduction of MSI scores) and 1 case (11.1%) had fair result (< 49% reduction of MSI scores). There was no complications.

CONCLUSION: Based on our preliminary data, the picosecond alexandrite laser with adjustable fluence DLA appears to be effective in treating refractory melasma in Thai patients.