ACOS23P-005: Treatment of Melasma and Solar Lentigo with Picosecond Laser-A Case Report

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Melasma, characterized by bilateral irregular brown or greyish macules and patches on the face, is a common benign pigmentary disorder in the Asian population. The pathophysiology involves hormonal factor, melanin incontinence and structural changes. Solar lentigo comprises well-defined hyperpigmented macules or patches which can be round, oval or irregular in shape with varying sizes. It results from exposure to ultraviolet (UV) radiation, which causes local proliferation of melanocytes and accumulation of melanin within keratinocytes. Picosecond laser technology has shown effectiveness in treating various cutaneous benign pigmentary disorders, including freckles, solar lentigines, melasma, Hori macule, nevus of Ota, post-inflammatory hyperpigmentation, and tattoo. We present a case of a 42-year-old female with a background of hyperthyroidism who presented with solar lentigo on the left cheek and centrofacial melasma. She underwent fractional CO2 laser on the solar lentigo with hyaluronic acid-based skin booster dermal injection followed by two sessions of picosecond laser. Significant reduction in pigmentation coupled with less defined borders of her melasma and solar lentigo were noted after the first session of a 450-picosecond pulse using a 1064-nm Nd:YAG laser. She subsequently had another session of picosecond laser with commencement of oral tranexamic acid 250mg OD and topical hydroquinone 4% cream. This case demonstrates the role of picosecond laser as a treatment option in combination with fractional CO2 laser, skin booster injection, oral tranexamic acid and topical therapy for management of melasma and solar lentigo.

Keywords: Melasma, Solar Lentigo, Solar Lentigines, Picosecond Laser