Clinical Bulletin

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GentleLASE® for Treatment of Hyperchromias

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Introduction

Hyperchromias appear as dark stains throughout the skin, from superficial pigmented lesions to deeper occurring marks.

Typically, hyperchromias are mixed. In other words, the same person can have both superficial and deeper stains, the latter being more difficult to treat.

Hyperchromias can be classified as follows:

- Post-inflammatory hyperchromias: Stains due to local trauma, with a deposit of dark pigment (hemosiderin).
- Melasma: Blotchy pigmentation of facial skin over the sun-exposed areas.
- Chloasma: Stains that appear during gestation with the same characteristics as melasma.
- Senile hyperchromias or ephelides/freckles: Round or circular stains—dispersed into the face, hands, and arms, caused by ultraviolet light.

All hyperchromias can be provoked and/or worsened by the sun, pregnancy, oral contraceptives and certain photosensitizing drugs.

Various modalities have been reported to treat solar lentigines, such as lasers, dermabrasion, epidermabrasion, cryotherapy, and chemical peelings.

In this study, we used the GentleLASE alexandrite laser to treat various forms of hyperchromias. Alexandrite therapy proved to be effective and tolerable for the patients to treat skin hyperpigmentations.

Method

We treat an average of 30 patients per month, who have some form of hyperchromia, with the alexandrite laser.

In all cases, we prescribe the use of moisturizing creams to use during the evening hours and strict sun protection during the day.

Additionally, all laser treatments are followed by deep hydration therapy one week post-treatment and we use topical bleaching agents, such as hydroquinone, kojic acid, and tretinoin."

The following results were for three different patients:

Patient 1: Single treatment of a 50-year-old, female patient demonstrating typical solar lentigines on the face and around the lips. Treatment parameters: 12 mm spot, 3 ms pulse duration, fluence 20 J/cm^2, and 30/100 Dynamic Cooling Device™ (DCD™).

Patient 2: A 55-year-old female presenting with solar lentigines. Three treatments using the following parameters: 12 mm spot, fluence 20–25 J/cm^2, and 30/100 DCD.

Patient 3: A 59 year-old female presenting with age spots and telangiectasias on the face. Three treatments using the following parameters: 12 mm spot, fluence 25-30 J/cm^2, and 20/100 DCD.

All treatments were made with intervals of at least one to two months.

with DCD

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Results

All patients were given cooling compresses to dissipate the heat immediately after the laser treatments. Patients were instructed to use moisturizing creams at night and sunscreen SPF>30 during the day.

One to three days after the treatment, dark microcrusts began to form where the hyperchromias previously presented themselves and persisted for seven to 10 days. In all cases, this crusting naturally sloughs off, resulting in improved pigmentation.

There were no symptoms, including burning and pain, the day after treatment.

Microcrusts, more often seen in patients with ephelides, represent more clinical improvement. However, patients without microcrusts also showed improvement.

Discussion

Hyperchromias can be treated with a variety of methodologies, including the use of lightening creams, acid baths, chemical peels, and cryotherapy. Peels and cryotherapy cause a general exfoliation of the skin, nonspecific to the stain itself.

Conclusion

Using the GentleLASE alexandrite laser, we can selectively target hyperchromias to more quickly and effectively eliminate the unwanted pigmentation with minimal discomfort or risk of side effects.

References

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Patient 1—pretreatment and post one treatment

Patient 2—pretreatment and post three treatments

Patient 3—pretreatment and post three treatments

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