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Non-Surgical Periorbital Hyperpigmentation (Dark Eye Circle) Reduction

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The periorbital region is the most important aesthetic unit in the human body. Periorbital hyperpigmentation is perhaps amongst the most commonly encountered conditions. There is very little scientific data available on the clinical profile and pathogenesis of this problem. Some of the recognizable etiologies include hereditary or genetic factors, melanocytic pigmentation, post-inflammatory hyperpigmentation secondary to contact or allergic dermatitis, excessive vascularity, shadows from aged skin laxity or tear trough, vascular congestion as a result of chronic sinusitis, allergic rhinitis, fatigue and/or general disease.

A holistic approach for reduction of this problem should be cause-targeted, not merely solved by filler injection, chemical peeling or topical medication.

The combined use of SP Dynamis and StarWalker has provided Fotona users (in fact, this should even be extended to all laser users) an unprecedented platform for holistic treatment that can target each causative factor for periorbital hyperpigmentation and rejuvenation.

Frac3 and SMOOTH mode are used concurrently for skin tightening; VERSA Mode can be used to remove excessive vascularity safely; SMOOTH mode at infraorbital palpebral conjunctiva can reduce the tear trough shadow by the mechanism of heat-induced infraorbital adipocyte apoptosis. Last but not least, the author also anecdotally discovered that infraorbital palpebral conjunctiva treatment with SMOOTH mode could reduce the vascular congestion of periorbital darkening caused by chronic sinusitis, chronic fatigue syndrome and rhinitis, which notoriously do not respond well to other treatments.

In conclusion, periorbital hyperpigmentation is a commonly encountered condition, especially amongst Asian, Mediterranean and Hispanic populations. The use of the Fotona SP Dynamis and StarWalker has opened up a new avenue of treatment that could potentially substitute for other invasive treatments such as fillers and surgery.

Improvement of Lower Eyelid Shape by Transconjunctival Er:YAG Laser Irradiation - A Device for Irradiation Based on the Mechanism of Action

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There are two types of aging-related changes in the lower eye lid: atrophy and laxity. We can improve atrophy by using various kinds of fillers, however, improvement of laxity requires a tightening effect. Some energy-based devices can contract the skin surface, but it is difficult to contract the orbital fat. Therefore, transconjunctival lower lid blepharoplasty is commonly performed in Japan. It's available to remove orbital fat directly. On the other hand, for less invasive procedure, transconjunctival Er:YAG laser irradiation has been used in recent years. Unfortunately, there are opinions that it is sometimes ineffective.

Considering the mechanism of action for the transvaginal or transurethral mucosal irradiation laser treatments, it is necessary to generate a photo-thermal effect firmly in the deep layer to contract the orbital fat tissue. Therefore, I think that the best results can be obtained by considering all of the three following conditions; the wavelength characteristics of Er:YAG, the pulse duration, and the water content adjustment. For a few months, I have been trying transconjunctival Er:YAG irradiation under these new conditions. I shall report these short-term results and discuss the advantage of this method.