

Combined Topical Delivery and Dermalinfusion of Decapeptide-12 Accelerates Resolution of Post-Inflammatory Hyperpigmentation in Skin of Color

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The combined use of topical delivery and dermalinfusion[®] of decapeptide-12 represents a novel, safe, and efficacious noninvasive approach to achieve accelerated resolution of postinflammatory hyperpigmentation (PIH), an especially difficult to treat and common dermatoses in skin of color.¹

SilkPeel[®] is a device that abrades the stratum corneum using a diamond-encrusted handpiece while simultaneously delivering a topical solution into the epidermis under pneumatic pressure.²⁻⁵ Primary indications for SilkPeel procedures include dry skin, acne, hyperpigmentation, and other dermatologic indications. Desai and Moy also described successful treatment of erythematotelangiectatic and papulopustular rosacea with SilkPeel dermalinfusion.⁶

Tyrosinase is the enzyme that catalyzes the first two steps (and possibly the fifth) of the biochemical synthesis of melanin.⁷ Abu Ubeid et al showed that decapeptide-12 was nearly a 17-fold more potent tyrosinase inhibitor than hydroquinone, and that unlike hydroquinone, it did not cause melanocyte cytotoxicity.⁷ A small pilot clinical study further demonstrated that 0.01% decapeptide-12, formulated in an inert cream base, diminished the appearance of recalcitrant melasma by 40% and 50% after 12 and 16 weeks of twice daily application, respectively.⁸

The SilkPeel procedure is performed by gliding the handpiece over the target treatment area while avoiding application of downward pressure. The depth of abrasion is controlled by varying vacuum pressure and coarseness of the diamond tip. To ensure patient tolerability, a lower vacuum setting is utilized when treating the neck (3 psi), and a higher setting when treating the cheeks, forehead and nose (4–5 psi). Using a finer grit diamond tip can also improve tolerability for those patients with more sensitive skin. Simultaneous infusion of topical solutions helps to lubricate the skin while delivering dermatologic actives and can be controlled by adjusting the flow setting on the device.

The SilkPeel procedure is appropriate for all Fitzpatrick skin types making it an ideal modality for skin of color.

Our patient was of Fitzpatrick skin type IV. She was treated with a series of 4 SilkPeel procedures spaced 2 weeks apart. Each treatment infused a solution containing 0.01% decapeptide-12 (Lumixyl[®]). We utilized an 80- or 100-grit diamond tip and a vacuum setting of 4.5 psi to treat the face. The flow was set to 80% throughout the procedure. In between visits, the patient was instructed to wear daily sunscreen (SPF30 or higher) and to apply a cream containing 0.01% decapeptide-12 (Lumixyl cream) twice daily.

Dermalinfusion of decapeptide-12 (Lumixyl) combined with twice-daily application of a decapeptide-12 cream (Lumixyl) can safely and effectively be used to accelerate clearance of PIH in skin of color.

FIGURE 1. Before and after digital photographs demonstrating marked improvement of PIH after combined treatment with topical and dermalinfused decapeptide-12 for 8 weeks.



DISCLOSURES

Dr. Hantash holds stock in and serves as the Vice Chairman of Envy Medical, Inc, manufacturer of Lumixyl[™] products. The other authors have not disclosed any relevant conflicts of interest.

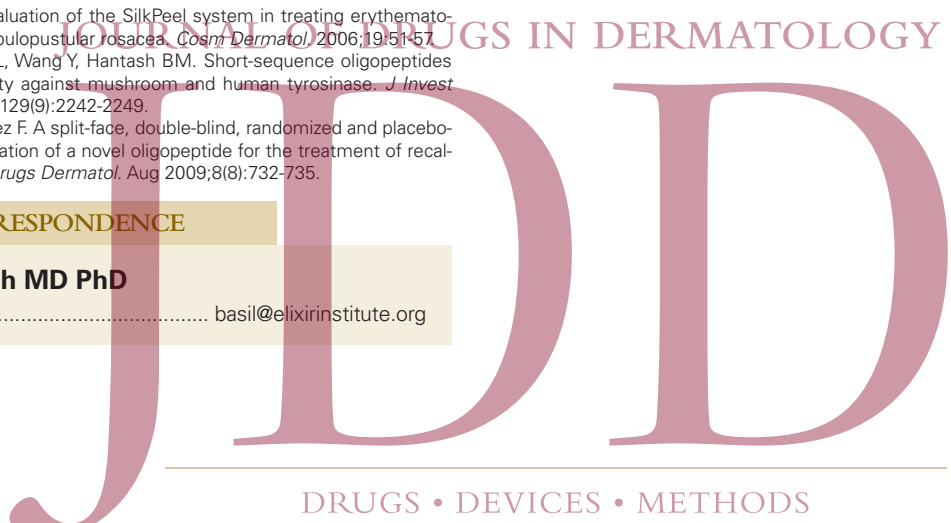
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