Combined pulsed microneedle radiofrequency and poly lactic acid delivery for improving melasma and photodamage

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Melasma is caused by disruption of homeostasis in dermal pigmentation. The pathogenesis of melasma is multifactorial and not well-defined. Patients exhibit different clinical and histological features, suggesting the involvement of multiple mechanisms.

Recent studies on aging-associated hyperpigmentation suggest that senescent fibroblasts influence epidermal melanocytes via cross-talk that occurs through the damaged basement membrane(BM). This impaired BM demonstrated in melasma may also contribute to the interaction between fibroblasts and epidermal melanocytes, further aggravating melanocyte activation.

In this presentation, I will outline the role of pulsed microneedle radiofrequency (MRF) in the melasma and photodamaged skin. I follow that with various poly lactic acid delivery combination strategies for Improving photodamaged skin. The combination of pulsed MRF and a poly lactic acid delivery is safe and shows an improved therapeutic effect for melasma.

Keywords : pulsed microneedle radiofrequency, poly lactic acid, melasma