

Skin of Color Symposium: Clinical and Aesthetic Approaches to Melasma

Presented by Dr. Amy McMichael, MD

Melasma is a chronic and recurring disorder of hyperpigmentation which results from hyperfunctional melanocytes depositing excess melanin into the epidermis and dermis. It more commonly affects women and frequently occurs on the face. There are a variety of types of melasma, and we now know there is a vascular component. This condition affects an individual's quality of life, including social situations and emotional well-being. Triple combination therapy with hydroquinone 4%, tretinoin 0.025%, and low dose hydrocortisone 2.5% has been shown to be effective, especially with short-contact topical cysteamine. For resistant melasma, consider tranexamic acid. It is important to screen out patients with a history of thromboembolism, stroke or heart disease.

Principles of melasma therapy include:

1. Protect the skin from sun exposure and always use sunscreen. Tinted, inorganic varieties are preferred as they contain iron oxide which protects against visible light.
2. Inhibit tyrosinase activity by reducing agents such as hydroquinone, arbutin, licorice extract and kojic acid.
3. Disrupt melanin granules using lasers (be careful in skin of color patients) in conjunction with lightening agents.
4. Remove melanin with the aid of chemical peels, microdermabrasion or cryosurgery.

Skin of Color Symposium: How to Approach Postinflammatory Hyperpigmentation

Presented by Valerie Callendar, MD

Postinflammatory hyperpigmentation (PIH) is a response to inflammation, irritation, cutaneous injury or lability of the melanocyte. Its seen as a result of many inflammatory skin disorders and procedures. PIH has various degrees of severity determined by skin color, degree and depth of inflammation and dermoepidermal junction disruption. Depth of the melanin pigment is the key factor in predicting prognosis and treatment outcomes. Epidermal inflammation stimulates melanocytes to increase melanin synthesis and transfer pigment to surrounding keratinocytes. Melanin then enters the dermis via a damaged basal layer, is phagocytized by macrophages and forming melanophages. In a study of 100 women, hyperpigmentation was shown to be a significant cosmetic concern. Therapies include protection from sun exposure, inhibition of tyrosinase activity, inhibition of melanosome transfer, removal of melanin, and destruction of melanin granules. Choosing a skin-lightening agent depends on multiple factors: diagnosis, location, skin type, formulation, prior treatment, concomitant medications, adjunctive therapy, coverage and cost.

Acne-induced PIH may take months or years to resolve itself, so providers must counsel patients and set expectations for improvement. Prescription options include topical retinoids, azelaic acid, topical dapsone or hydroquinone. Retinoids can cause melanin granule dispersion and depigmentation, and inhibit tyrosinase and melanogenesis. Azelaic acid inhibits tyrosinase and has shown complete resolution of acne-induced PIH in two thirds of patients after 16 weeks. Dapsone 7.5% has shown significant improvement in studies. Hydroquinone also inhibits tyrosinase and acts as an antioxidant. It works well in combination with topical retinoids and steroids and is usually added after 4-6 weeks of topical retinoids with or without BPO.

Cosmeceutical cocktails can be effective as well, as demonstrated in the available literature. Sunscreens are a necessity. Chemical peels should be titrated and used in series. Laser treatment (such as with a 1064nm laser with a 650ms pulse duration) has also shown efficacy. Providers should always remember to treat the cause first, counsel patients on sun protections, treat acne and PIH concurrently, achieve skin lightening with both prescription and over-the-counter products, and use lasers when necessary.

Skin of Color Symposium: Aesthetic Procedure Safety and Nuances

Presented by Seemal Desai, MD

There are new social campaigns now to celebrate dark skin and fight colorism – the idea that dark skin is an undesired look and that cosmetic measures should be taken to lighten skin. Lasers seem to be appropriate as a third- or fourth-line melasma treatment. One study showed that using a low-fluence Q-switched Nd:YAG laser immediately following microdermabrasion showed more than 50% efficacy in treating melasma, one month after first treatment and repeated at four week intervals. It is important to pretreat patients to avoid burning and use laser skin resurfacing prior to laser use. Pretreatment regimens include daily application of broad-spectrum sunscreen and topical skin care regimen of hydroquinone with tretinoin or vitamin C.

Combination chemical peels can be effective, including Jessner's solution + 20% TCA for full face ice pick acne scars, salicylic acid 30% and 10-20% mandelic acid for acne vulgaris, and TCA 10% immediately after microneedling for dark circles. 10% TCA is considered more appropriate for shallow depth treatment vs 20% TCA. Salicylic acid is a beta-hydroxy acid and mandelic acid is an alpha-hydroxy acid which work great in combo. In a case study of Dr. Desai's patient, the patient had gone to a med spa and had a medium-depth chemical peel without pretreatment and continued use of topical tretinoin and presented with erosions on the face just prior to her prom. This underscores the importance of stopping topical retinoids and pre-treating prior to peels. Med influencers can cause a lot of misinformation as well. Glutathione has never shown to be effective in skin-bleaching in FDA trials. FDA has scheduled a warning in using IV glutathione infusions which are often used in dark-skinned patients looking to lighten their skin.

In summary, it is important to prime the skin for aesthetic procedures, use a broad-spectrum SPF 30 sunscreen with cosmeceuticals and inorganic substances, stop topical retinoid use (including over-the-counter products) five to seven days prior to all aesthetic treatments, and get a herpes simplex virus history from the patient. Join the Skin of Color Society for more information.