



An Update on Melasma and Innovative Management Options

Ronda Farah, MD

Melasma is a perplexing skin disease that often causes darkening of the skin. This skin discoloration is a common issue for many dermatology patients. As an expert in skin of color, Dr. Seemal R. Desai, gives us insight into the new and upcoming trends in the management of melasma during an interview with Dr. Ronda Farah.

Dr. Desai is a Board Certified Dermatologist and a Diplomate of the American Board of Dermatology. He is the National Secretary/Treasurer of the Skin of Color Society. In addition to being Clinical Assistant Professor of Dermatology at The University of Texas Southwestern Medical Center, he is also the Founder and Medical Director of Innovative Dermatology in Dallas, Texas. Dr. Farah is an Assistant Professor of Dermatology and Director of the M Health Cosmetic Center Dermatology, University of Minnesota.

Dr. Farah: Tell us how you use utilized your expertise to diagnose melasma.

Dr. Desai: Melasma is an acquired darkening of the skin with brownish patches that are symmetric in their distribution. They are common on the facial areas. However, this can be outside the face including the arms, forearms, and upper chest. Typically this disease occurs in women. However, it can also be seen in men.

Dr. Farah: What causes melasma?

Dr. Desai: The pathogenesis is classically thought to be hormonal. We are now seeing it may also be an inflammatory process, as well as have a vascular component. It has also been associated with thyroid disease, hormonal medications, and even other drugs like chemotherapeutics.

Dr. Farah: Is their any new research on this disease?

Dr. Desai: There are many steps in the melanogenesis pathway that are being studied. For example, the enzyme peroxidase, which we don't think of as being the main pathway in melanogenesis has been a focus of study as a treatment target. VEGF and cytokines could also be possible targets for the future. Research is no longer focused only on melanin production via the tyrosine pathway.

Dr. Farah: What are you pearls for treating melasma?

Dr. Desai: Photoprotection is important. This includes using sunscreens containing physical blockers. Chemical blockers are less often used, as I have seen patients who actually have a contact dermatitis to chemical sunscreens and/or an actual allergy to one or more of the ingredients. I try to avoid use of a hydroquinone containing skin product for more than 8 weeks continuously. Then, I reassess for efficacy and consider using a non- hydroquinone based agent skin brightening agents. I often turn to azelaic acid, even though it is an off-label use of the medication. Do not forget use of chemical peel treatments, particularly salicylic acid peels and as this can impact oil and sebum production while targeting pigment. I really like salicylic acid peels, even though studies favor the use of glycolic acid peels for melasma.

Lasers can play a role in a select number of patients. The important aspect of lasers is that you can quickly worsen the disease. Low fluence q-switched Nd:Yag laser has some evidence that it may be helpful. More studies are needed. This should certainly not be first line.

Dr. Farah: Are there any novel treatments we should be aware of?

Dr. Desai: Tranexamic acid is a new and upcoming therapy for melasma and is a fibrinolytic agent. I have used this with improvement in patients. I avoid use in those with hematologic or clotting disorders.

Polypodium leucotomos is a fern extract has also been used as a sun protectant which creates a natural UV protective factor as well as serving as an anti-oxidant. I frequently encourage my patients to be on this therapy.

Another upcoming option is oral glutathione, a strong antioxidant. This drug is poorly bioavailable and little is absorbed in the gut. Outside of the United States, it is therefore used intravenously. Of course, more studies are needed to really evaluate its true mechanism and role in melasma.