

Melasma: A Commentary

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One of my patients, a about 50 year old Hispanic female, with skin type IV, came to discuss treatment options of Melasma. After her skin evaluation, I recommended a TCA peel. She understood the risks and benefits and agreed to proceed with the peel. A 35% TCA peel was performed. She was also using bleaching creams and sunblock. When I saw her for a one month follow up, I was surprised to see that her Melasma was gone and she was very pleased. She came back three years later with Melasma again. She insisted that she wants the “same” treatment as three years ago. I performed another 35% TCA peel. This time when she came back for one month follow up, her melasma was worse than before the peel. I advised her to use TriLuma cream. Her one month follow up showed no improvement. I advised her to continue TriLuma for few more weeks. When she came back for her follow up this time, her Melasma has cleared 90%. I was very pleased but she told me that TriLuma didn’t work and she has been using a Chinese bleaching cream that she found at a Flea market. She showed be the box of the cream but everything was written in Chinese and I could not figure out the ingredients. Few months later while I was on a flight, I asked a fellow passenger sitting next to me who was reading a Chinese newspaper, to read the writings on the box. She told me that there are no ingredients listed but it only shows where this cream was produced. I did some more research to find out the ingredients but failed. I assume it had Mercury.

This story is repeated all around the world in Dermatology practices. Melasma is one of the most frustrating conditions that we deal with. There is no cure and treatments barely work and are always temporary.

Melasma is an acquired pigmentary disorder that presents as dark patches on the cheeks, forehead, upper lip, chin, etc. It is fairly common in females with skin type III-V with history of excessive sun exposure. It is affected by hormonal factors and gets worse or starts during pregnancy or while on birth-control hormones. The exact pathophysiology of Melasma remains unknown but some studies have shown involvement of stem cell, c-kit, neural and vascular growth

factors.

Treatment of Melasma remains a challenge even though we have several different options. Sun/UV protection is the most important treatment not only to prevent worsening of Melasma but it enhances the efficacy of other topical treatments. One can also temporarily hide Melasma with camouflage make up. Hydroquinone along with other Tyrosinase inhibitors, is the most commonly used agent to use cutaneous hyperpigmentation. Other such topical agents include Retinoid (by stimulating keratinocyte turnover), Kojic and Ascorbic acids (by interacting with copper), etc. TriLuma cream, with 4% hydroquinone, 0.05% tretinoin and 0.01% Fluocinolone acetonide is the most commonly used Melasma cream in the United States. Chemical peels are also used very frequently to treat Melasma. These include Glycolic acid, Salicylic acid and Trichloroacetic acid peels at various strengths.

A number of lasers have been tried to treat Melasma. These include Q-switched Nd:YAG, Ruby, Alexandrite lasers, Er:YAG, CO₂ lasers and Intense Pulsed Light devices. Fractional non-ablative laser is the only one that is FDA approved for the treatment of Melasma but it’s efficacy remains disappointing.

A recent study using a combination of microdermabrasion, low fluence Q-switched Nd:YAG laser, topical bleaching agents and sunscreen has show promising results. Oral Glutathione has been found to be effective in lightening of skin color but it’s long-term safety is unknown.

We continue to search for new treatments of all skin conditions. Many centers and dermatologists are trying new devices and methods including fractional ablative lasers along with drug-delivery via laser induced channels. The mainstay or Melasma treatment is a “combination” including ablation/peeling of skin and use of topical agents, use of photo-protection, avoiding triggering factors, such hormones, etc. The use of oral agents will need further long term studies to prove it’s safety.

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