

## Not too dark, not too light, the quest for skin, that's just right

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Witness the grand quest for perfect complexion. We see it in advertisements for beauty products promising healthy, even skin with a lustrous glow noticed by all. The success of these efforts is reflected in the billions spent on skin products, particularly those that lighten skin. But as dermatologists, we wonder, what is being treated? Is it melasma, post-inflammatory hyperpigmentation (PIH) from acne, lentigines, dark circles or just overall skin tone? In this issue of the IJDVL we learn it is all of the above, as well as some, which are currently a mystery.

Hourblin *et al.* should be commended for having performed a large study which sheds light on the problem of uneven skin among Indian women.<sup>[1]</sup> Some results were expected, including the findings that lentigines, postinflammatory hyperpigmentation, seborrheic keratoses, melasma and dark circles around the eyes are very common in this population. Interestingly, the mean age of women with melasma was 51, which is higher than most previous reports.<sup>[2]</sup> The fact that melasma persists in Indian women even after menopause is also unique, as this disorder usually fades in post-menopausal years. The sheer numbers are quite impressive, with the vast majority of women having lentigines, peri-orbital dark circles and seborrheic keratoses. The fact that over 80% of

women over the age of 40 had dark circles around the eyelids helps to explain the huge demand for lightening products that are gentle to the skin and is a wake-up call for dermatology researchers to explore these uncharted waters more thoroughly.

But the authors also discovered other, more puzzling, pigmentary problems. The so-called "ill-defined pigmented macules" were seen in an alarming 70% of the subjects, and the prevalence of these asymmetrical lesions increased with age. We have all seen these dark macules, which are poorly margined and often grayish in color. What is this entity? Could some have a form of acanthosis nigricans associated with hyperinsulinemia?<sup>[3]</sup> How about a form of hypersensitivity to topical formulations, systemic medication or the sun? Many theories exist, but clearly we need more careful research for this disfiguring disorder. Perilabial pigmentation, particularly at the commissures of the mouth was seen in 72% of subjects and a large number had pigmented marionette lines as well. This figure naturally begs the question: Why does this occur? Is it due to inflammation, seborrheic dermatitis, perleche or movement of facial muscles? Surely with such high prevalence there should be further research into this peculiar problem. Finally, the authors reported pigmentation at the angle of the nose in 46% and a line across the nose in 25%, which increased with age. Again, entities not easily discoverable during a literature search, yet so common among the patients in this study. Transverse nasal groove has been reported in one series from India as a groove, line or ridge across the nose and may be associated with a seborrheic diathesis.<sup>[4]</sup>

A commonly held belief which was challenged by this article is that Indian women become darker as they age. Using careful objective measurements with a Chromameter, the authors showed the darkness ( $L^*$ ) value of the cheek doesn't change much when measured in women of different ages except in Chennai, where

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complexion is darker overall. So perhaps the focus should be on treating the various disorders described above rather than lightening of the entire surface of the face to help the patient achieve a more even complexion. Particular attention should be placed on lentiginos and seborrheic keratoses, which had an early onset of just 30 years of age in Indian women. Differences in skin tone among the different cities may be explained by the different skin types among the populations of each city. However, it is interesting that Mumbai, a cosmopolitan city with a diverse population, had subjects with much lighter skin than the other cities.

Any effort to help patients with dyschromia should be tempered by careful counseling regarding safety issues. Misuse of topical skin-lightening agents containing tyrosinase inhibitors, keratolytic agents and corticosteroids is frequent worldwide and patients in India have been reported to present with erythema, irritation, telangiectasias, steroid acne, hypertrichosis, erythema, confetti depigmentation and rosacea as a result of this overuse.<sup>[5]</sup> Unfortunately, the easy availability of depigmenting creams without a prescription promotes the use of these products without proper supervision by a physician. Although some efforts are under way in India to promote natural skin color, the desire to be lighter is ancient and does not appear to be likely to abate any time soon.

Patients will continue to seek our help for dyschromia. We have learned to first determine if there is a particular disorder that requires a unique treatment,

such as post-inflammatory hyperpigmentation from acne. But unfortunately, many disorders, such as melasma and periorbital dark circles, are not so easy to manage, probably due to the fact that their etiology is still not clear. Some disorders, such as ill-defined macules and dark lines across the nose have barely been explored, much less subjected to controlled trials with therapeutic agents. The subject highlighted in this article is important and gives pause for reflection, but it is also a call to action. Our patients deserve it. Will there be some answers for doctors who treat patients struggling with dyschromia? We continue to hope for the discoveries of tomorrow as we put down our journal and turn toward our next patient, who likely has a pigmentary disorder for which she has come for our help.

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