Current Issues in Treating Patients with Skin of Color

As the number of individuals with Fitzpatrick skin types III-VI continues to increase in the United States, a better understanding of the biological differences in the skin of these patients is crucial for dermatologists, as well as the non-clinical factors that influence skin-related health outcomes in this population.

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By the year 2050, the number of individuals with ethnic skin in the United States is projected to account for more than half of the total population.[1,2] The skin of these individuals — often referred to in dermatology as patients with skin of color — presents a number of unique circumstances and diagnoses for the dermatologist, because of darker skin's reaction to certain treatments, a higher likelihood of late detection, conditions not seen in lighter skin and more.

In addition to the general principles of the skin that may be different in individuals with Fitzpatrick skin types III-VI, there are other factors that make the skincare of these patients unique. These factors include barriers to skin health, such as socioeconomic status (SES), access and more; lack of knowledge about the need for dermatologic care; and cofounding clinical variables like obesity. This article will review these factors and examine how they influence the dermatologic health of patients with skin of color. New treatments and techniques that are available and the steps that are being taken to improve the skin health of this patient population will also be explored.

AESTHETIC DERMATOLOGY AND ETHNIC SKIN

Aesthetic improvement is, for patients with darker skin types, a common reason for visits to the dermatologist, as it may be for patients of any skin type. In this subgroup, however, the aging process and the signs of aging are different.

In 2011, Davis and Callender published a review of aesthetic dermatology for aging ethnic skin in *Dermatologic Surgery*. In the article, they write: "Certain differences exist in the degree to and rate at which ethnic groups manifest the signs of skin aging."[3] The authors point to the higher degree of pigment in darker skin types that provides inherent protection against sun damage, which leads to photodamage that occurs 10 to 20 years later than

in Caucasian patients, as one of the primary reasons that many ethnic patients experience different signs of aging. Other differences in this patient population include fewer rhytids but more pigmentation, mid-facial aging instead of photodamage, and dermatosis papulosa nigra rather than seborrheic keratoses as compared to fair-skinned patients.[3]

"Skin of color doesn't age the way that light skin does," explains Kenneth Beer, MD, a dermatologist in private practice in West Palm Beach, FL, who is also a volunteer clinical instructor in dermatology at the University of Miami, a consulting associate in the Department of Medicine at Duke University and director of the Cosmetic Bootcamp meeting. "While they have fewer wrinkles, they have more pigmentation problems."

As a result of these inherent differences in skin type, the cosmetic treatments offered must be chosen specifically to ensure safe procedures and effective outcomes for particular skin types.

Laser Hair Removal

Laser hair removal (LHR) was originally contraindicated in patients with Fitzpatrick skin types IV-VI because of the risk for thermal damage, which can result in epidermal blistering, dyspigmentation and scarring.[4] In addition, "in competing for laser light, epidermal melanin also decreases the amount of light that is available to reach the intended dermal chromophore target. Thus, epidermal melanin, acting as an unintended chromophore, decreases therapeutic efficacy and increases the possibility of untoward side effects."[4]

Because of the early research on LHR, many patients with skin of color may still be under the perception that the procedure is not safe or efficacious for them. As a result, it is crucial for dermatologists to correct any misinformation and increase awareness of the new LHR research in these populations.

"Most people know that LHR is an option — they don't necessarily consider it a new option — but a lot of patients still come into the office saying to me, 'Oh, I've heard that if you're darker than somebody Asian that you can't use LHR,'" explains Jeanine Downie, MD, FAAD, of Image Dermatology in Montclair, NJ. "So people come in all the time thinking that they're not going to be able to do LHR, but these machines have been out since the early 2000s and they're available [to patients with darker skin]. So, it's not a new procedure — it's just new information to them."

Jill Waibel, MD, FAAD, medical director and owner of Miami Dermatology and Laser Institute in Florida, offers a full range of dermatology treatments but specializes in cutaneous laser surgery.

"There are some devices that you cannot use in skin of color because you don't want to interfere with their natural melanin," Dr. Waibel explains. "But the fractional lasers are safe in skin of color patients. I do laser hair removal on all skin types, and, for Types V and VI, I recommend using the Nd:YAG laser — it's proven safe — but, for lighter skin than that, you can use a diode or an Alexandrite laser. You just have to understand laser-tissue interactions and usually turn down the laser settings for darker-skinned patients."

An examination of patients' knowledge and attitudes about LHR in African-American patients revealed that almost half of the patients (44.8%) still lacked sufficient knowledge about LHR being safe for dark-skinned patients.[5] The authors examined several factors that may contribute to this, including misconceptions from the early LHR research that have not been corrected; low knowledge and negative attitudes about LHR were higher among patients with less than a college education.[5] The cost of LHR may also contribute to this lack of knowledge and lower utilization of the procedure by patients with darker skin.[5]

As a result, it is crucial that dermatologists discuss LHR with patients with darker skin types and answer any questions that may arise, explains Amy McMichael, MD, of the Center for Dermatology Research and the department of dermatology at Wake Forest University School of Medicine in Winston-Salem, NC. Dr. McMichael served as senior author on the above paper about attitudes on LHR.

"It is important to mention LHR as an option for treatment," explains Dr. McMichael. "Also, it is important to let them know that this option does not result in scarring, helps with pigmentation that results from other forms of hair removal, and that the treatment will likely take more treatments than in patients who are Caucasian."

Injectables and Fillers

The differences in the aging process in ethnic patients compared to Caucasians is particularly important to understand when it comes to using fillers and injectables, because the intrinsic differences in skin of color aging will impact the treatments.

"Dark-skinned patients don't tend to need as many aesthetic procedures, because their dark skin protects them from photoaging better than light-skinned patients, but they also have cosmetic concerns," explains Dr. Waibel. "Fillers in the nasolabial folds of dark-skinned patients are a popular procedure."

Dr. Downie also treats patients with darker skin with injectables and fillers; she utilizes Botox, Juvederm, Restylane and Perlane for these patients in her practice, as well as Radiesse, to a lesser degree. The literature increasingly shows support for the use of fillers in patients with skin of color. One review of fillers in this population found that there were some transient, and fewer long-term, pigmentary changes and no occurrence of keloids.[6] In addition to the fillers mentioned by Dr. Downie, the literature shows that Hylaform, Hylaform Plus and Captique are effective for darker skin types.[6]

The literature on fillers in this population suggests that there are several principles to keep in mind to maximize outcomes and minimize adverse events. Suggestions include utilizing a specific technique, like linear threading, to limit the total number of injections needed; minimizing the risk of post-inflammatory hyperpigmentation (PIH) with a mid-potency topical corticosteroid when erythema does occur; encouraging patients to use sunscreen; and using hydroquinone to either minimize the risk of hyperpigmentation in susceptible individuals or to treat early-onset hyperpigmentation.[7]

OTHER FACTORS TO CONSIDER WHEN TREATING PATIENTS WITH SKIN OF COLOR

In addition to the unique properties of their skin, the care of ethnic patients is further complicated by a number of non-clinical factors. These issues, including higher rates of obesity in ethnic

Skin Cancer in Dark-Skinned Patients

Skin cancer is another pertinent topic in this population. While people with skin types III-VI are less likely to get skin cancer of any kind, primarily because of the photoprotection that is provided by increased epidermal melanin, skin cancer in this population is more likely to be detected later and, therefore, yield a worse prognosis.[16,17,18]

"All patients, regardless of skin type, can get sun damage, but the damage looks different in patients with darker skin," explains Dr. McMichael, including skin laxity, increased pigmentation and other complexion issues.

In addition to late detection, the non-clinical barriers discussed in this article are another part of why patients with skin of color experience increased morbidity and mortality when it comes to skin cancers of all types, including basal cell carcinoma, squamous cell carcinoma, melanoma, cutaneous T-cell lymphoma, Kaposi's sarcoma and dermatofibrosarcoma protuberans.[16,17] These factors include SES, culture, decreased use of sunscreen and fewer self exams.[18]

According to Dr. Beer, all of these factors combined — the inherent properties of darker skin and the non-clinical barriers — have a significant impact on skin cancer outcomes in the skin of color population, more so than one factor alone.

"It's late discovery, it's lack of information, it's lack of access to specialty care," Dr. Beer explains. "It's like everything else — blacks die more from MIs, they die more from many of the cardiometabolic problems, and it comes down to access."

The most significant tool dermatologists have to decrease the higher rates of morbidity and mortality from skin cancers in skin of color patients is the same one that must be utilized for obesity and non-clinical health barriers — education — as well as a greater effort to address these concerns in the exam.

"Many dermatologists don't do enough total-body cutaneous checks on skin of color patients," explains Dr. Downie. "So, we have, at present, later-stage melanoma and a higher melanoma-specific mortality...There are gaps in detection with melanoma, and there are gaps in underestimating the risk in skin of color populations."

Dr. Waibel agrees that the first step in curbing the morbidity and mortality rates from skin cancers of all kinds — but particularly melanoma — among these patients is for dermatologists to be more aware of the issue and more consistent in their evaluations of these patients.

"One of the barriers I think we created, iatrogenically as physicians, is, for a long time, we thought, 'Oh, dark-skinned patients don't get as much skin cancer, they don't get melanomas because they have all this melanin — but it's not true, so we really have to educate our dark-skinned patients to wear sunscreen, because they're just not brought up, in a cultural sense, to take care of their skin. We have to do a better job of educating our dark-skinned patients on skin health."

populations[8] and barriers to healthcare delivery, can lead to an exacerbation of dermatologic conditions and worse outcomes for patients with dark skin.

Obesity

A report from the National Center for Health Statistics shows that, in 2009-2010, people of non-white ethnicities were the most obese people in the United States.[8] Among adults 20 years of age and older, 38.8% of non-Hispanic black men, 37.0% of Hispanic men and 36.2% of non-Hispanic white men were obese.[8] Among women, 58.5% of non-Hispanic blacks, 41.4% of Hispanics and 32.2% of non-Hispanic whites were obese.[8] Data from the Centers for Disease Control and Prevention (CDC) also demonstrates that blacks had the highest prevalence of obesity in a report from 2010, followed by Hispanics and then Caucasians.[9]

"There is a high prevalence of polycystic ovarian syndrome, along with acne, hirsutism and acanthosis nigricans in this population, and little understanding that these conditions are exacerbated by weight," explains Dr. McMichael.

Dr. Beer concurs about the link between obesity and an exacerbation of skin problems in this population, adding that there are also higher degrees of fungal infections and skin irritation among patients with skin of color, primarily due to friction and rubbing.

A poster presentation from the 2012 Summer Meeting of the American Academy of Dermatology examined the feasibility of using acanthosis nigricans (AN) as a marker for insulin resistance (IR).[10] The researchers reported that 31.34% of subjects suffered from IR; grades III and IV AN were more predictive of IR.[10] The report concluded: "IR is a modifiable risk factor for Type II Diabetes Mellitus, hypertension, lipid abnormalities and atherosclerotic cardiovascular disease. AN grading is inexpensive, non-invasive and helps identify those at risk."[10] Because of the link between obesity and AN, and the higher rates of obesity in ethnic patients, AN is a frequent concern for ethnic patients.

"Many patients come to the dermatologist wanting to depigment dark plaques along the sides of the neck, under the arms and between the legs," explains Dr. McMichael. "They don't realize that this is acanthosis nigricans, a form of thickening of the skin that occurs as a result of insulin resistance in patients who are overweight."

Of course, a proper diet and an exercise regimen is an important part of overall health, not just for dermatologic health, but dermatologists can use the link between obesity and skin problems to have a discussion with patients about the widespread impact — and importance — of a healthy diet and lifestyle.

"Being healthy is so important," explains Dr. Waibel. "You have to do it [talking to patients] gently, because you don't want to hurt feelings and you don't want to create trauma, but, if you have a heart attack in your 50s, it's not what you did when you were 45. Once you're obese, you have increased acne, you can get striae... It's so unhealthy on all of the body organs, and, as a doctor, you have to address that, telling people to eat healthy and exercise every day."

Anecdotal evidence from dermatologists shows that, in addition to poor diet and lack of exercise, there may be another factor leading to the high rates of obesity in African-American women specifically.

"Our data indicates that 50% of African-American women between 21 to 60

years of age have modified their hairstyle to accommodate exercise and nearly 40% avoid exercise at times due to issues related to their hair," explains Dr. McMichael. "Respondents who exercised less due to hair concerns were 2.9 times less likely to exercise >150 minutes/week (P=0.08). Findings from this study may be important to incorporate into strategies focused on increasing physical activity among African-American women."

Dr. Downie confirms the study's findings with her observations from practice, and stresses that the link between hair and a lack of exercise, particularly in African-American women, must be addressed.

"I tell people all the time: I exercise seven days a week. You can't have a good hair day every day," Dr. Downie explains. "It is a hair issue, more than anything else, because many African-American women don't wash their hair every day. So, because of that, I tell them: You know, you can't have a good hair day every day, sometimes you just have to put it up, sometimes it's going to be flat and not have a curl because it's super humid – that type of thing… It's not that they don't have a nanny, it's not that they don't have a gym, they just don't want to mess up their hair. It's a huge barrier, a huge frustration and a significant problem."

Additional Barriers to Skin Health

Patients of non-white ethnicities are disproportionately affected by barriers to health, including education, living conditions, SES, culture, language and more.[11-15] In dermatology, some of the most significant barriers to proper skincare include access (transportation, childcare, etc.), education and health literacy.

"Health literacy is a problem with some of my Hispanic patients due to my poor Spanish," explains Dr. Waibel. "If they're not literate, and they don't speak the language, and you're trying to give them medical documents on how to take care of eczema… When you start to talk to them, it's very challenging, whether they didn't use the medicine or couldn't understand the instructions. Even my medical assistants, who are all fluent in Spanish, give instructions and I often worry that something may be lost in translation."

Dr. Beer believes access, poverty and education are the biggest factors that hinder care.

"As with other branches of medicine, the lower socioeconomic strata have access to primary care, if that, and that's sort of where it stops," he explains. "It's not just dermatology — it's endocrinology, it's vascular medicine, it's neurology, it's psychiatry – it's every specialty. Also, until recently, there weren't that many African-American dermatologists – it wasn't even that African-Americans wanted to go and see an African-American dermatologist, but there weren't a whole lot of people in the specialty who looked like them who sort of said, 'Dermatology is for you, too.' I don't even think they need to see an African-American dermatologist, but the fact that there are African-American dermatologists now means that the community has a seat at the table and feels that the specialty represents them."

A review of the role black and Hispanic physicians play in the care of underserved populations supports Dr. Beer's observations.[12] In general, the analysis — which looked at primary care physicians — revealed that black physicians practiced in areas where the mean percentage of black residents was nearly five times as high as in areas where other physicians practiced.[12] The same was true for Hispanic physicians.[12] The results demonstrate "that residents of communities with high percentages of minority-group members may be in particular need of healthcare services and that physicians who choose to practice in these areas fill a critical need… Our data suggests that physicians who are black or Hispanic fill an important role in caring for poor people and members of minority groups."[12]

Traditional beliefs and attitudes about the need for healthcare can lead to the idea in some cultures that health problems, including skin issues, may be alleviated by all-natural, home or folk remedies.[11] As a result of these beliefs, some minority groups do not see a need for specialty visits.

"There are many skin of color patients who are very comfortable with going to the doctor and there are many skin of color patients who are not comfortable at all with going to the doctor," Dr. Downie explains. "The thought that they're going to go see a dermatologist who they've never seen before in their life makes them wonder, 'Why is this necessary?' It's aggravating and it's annoying to them."

Despite the barriers that exist for these patients, Dr. McMichael believes that they are improving.

"There are a number of barriers for seeing dermatologists," she explains. "Many of these have improved over the last 10 years, but many patients don't understand that there are treatments available for their skin problems."

As with the link between obesity and exacerbated skin problems, the key to increasing skincare awareness and improving access for patients with skin of color may be education. There are numerous ways in which the dermatologic care of these patients are evolving, including a greater availability of cosmetic treatments and a broader understanding of the non-clinical issues that impact this population's views on skin health. An increased understanding of these issues and utilization of new techniques will lead to improvements in the delivery of care and, as a result, health outcomes for skin of color patients. ■

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