The United States is becoming increasingly more diverse as the population of ethnic groups continues to rise faster than ever. By 2044, the US Census Bureau projects that greater than 50% of the US population will be of nonwhite descent. Ethnic patients are the quickest growing portion of the cosmetic procedures market, with African-Americans comprising 7.1% of the 22% of ethnic minorities who received cosmetic procedures in the United States in 2014. The cosmetic concerns and natural features of this ethnic population are unique and guided by differing structural and aging processes than their white counterparts. As people of color increasingly seek nonsurgical cosmetic procedures, dermatologists and cosmetic surgeons must become aware that the Westernized look does not necessarily constitute beauty in these diverse people. The use of specialized aesthetic approaches and understanding of cultural and ethnic-specific features are warranted in the treatment of these patients. This article will review the key principles to consider when treating African-American patients, including the average facial structure of African-Americans, the impact of their ethnicity on aging and structure of face, and soft-tissue augmentation strategies specific to African-American skin. (Plast. Reconstr. Surg. 136: 28S, 2015.)

Summary: The United States is becoming increasingly more diverse as the nonwhite population continues to rise faster than ever. By 2044, the US Census Bureau projects that greater than 50% of the US population will be of nonwhite descent. Ethnic patients are the quickest growing portion of the cosmetic procedures market, with African-Americans comprising 7.1% of the 22% of ethnic minorities who received cosmetic procedures in the United States in 2014. The cosmetic concerns and natural features of this ethnic population are unique and guided by differing structural and aging processes than their white counterparts. As people of color increasingly seek nonsurgical cosmetic procedures, dermatologists and cosmetic surgeons must become aware that the Westernized look does not necessarily constitute beauty in these diverse people. The use of specialized aesthetic approaches and understanding of cultural and ethnic-specific features are warranted in the treatment of these patients. This article will review the key principles to consider when treating African-American patients, including the average facial structure of African-Americans, the impact of their ethnicity on aging and structure of face, and soft-tissue augmentation strategies specific to African-American skin. (Plast. Reconstr. Surg. 136: 28S, 2015.)

Ethnic and Gender Considerations in the Use of Facial Injectables: African-American Patients

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impact of ethnicity on aging and the potential for scarring and postinflammatory hyperpigmentation (PIH).

**FILLERS AND NEUROMODULATORS**

Although African-Americans do not experience perioral rhytids at the frequency of whites, they do experience a variety of other issues related to skin sagging and sinking, which can be treated with soft-tissue augmentation. In fact, fillers that stimulate collagen, elastin production, or skin tightening may be more effective in skin of color. These patients have more stimulation of collagen from these procedures and histologically demonstrate less thinning of collagen bundles and elastic tissue at baseline and after treatment. They may therefore require fewer treatment than their white counterparts.

The Federal Drug Administration has cleared stimulatory fillers, which include calcium hydroxyapatite (CaHa) (ie, Radiesse; Merz Aesthetics, Raleigh, N.C.) and poly-l-lactic acid (PLLA) (ie, Galderma, Fort Worth, Tex.). These stimulatory fillers are augmentation products that cause ongoing reactions resulting in volumizing. Either filler can be used in deeper regions to create more supportive structure and foundation.7,8

CaHa is injected into subdermal or on the periorium due to its viscous, thick paste–like consistency. CaHa is best for areas of volume loss, such as the cheek, nasolabial folds, and marionette lines. CaHa leads to semipermanent augmentation lasting from 10 to 18 months, depending on injection depth, technique, and patient variability (Fig. 1).

PLLA causes immediate physical improvement when injected into the deep dermis or dermal-subcutaneous plane, but initial effects fade over the first week as water is absorbed. PLLA microparticles induce collagen formation, leading to dermal thickening over 3–6 months, necessitating great patience through the span of treatment sessions from both the physician and patient. PLLA is currently Food and Drug Administration approved for HIV-associated lipodystrophy, correction of shallow to deep nasolabial folds, contour deficiencies, and other facial rhytids.

Due to a shifting paradigm in beauty, since the 1990s, full lips are no longer considered unattractive but rather a coveted feature by women in general.9 This change is motivating black women to emphasize the beauty of their lips, leading to a demand to rebuild the aging lip.9,10 Opposed to white women who are looking to increase the size of their lip, black women are seeking augmentation to restore their lip size to that of their youth. Unlike their white counterparts, collagen enhancement of the vermilion border is rarely performed in African-American women. As this population ages, women of African descent develop rhytids predominantly in the body of the lip below the vermilion border. This occurs in response to the loss of volume of the upper lip, while the lower lip usually maintains its same appearance.

Primary treatment of the lip in African-American women consists of superiorly rolling the lip using injections of hyaluronic acid. Unlike stimulating fillers, hyaluronic acid is primarily used to fill space. Hyaluronic acid can be used in the body of the lip to reshape or enlarge the lips. This may be followed with botulinum toxin-A injection for relaxation of periorbicularis oris musculature to resolve perioral rhytids.11 Hyaluronic acid is also
indicated for the treatment of more superficial corrections, such as smoothing surfaces.

Botulinum toxin-A is often used for the relaxation of glabellar frown lines in patients of color.\textsuperscript{7,10,11}

Dynamic rhytids (furrows and frown/scowl arising from laughing, frowning, or smiling) can be treated safely in skin of color using botulinum toxin off-label for relaxation of the upper and lower hyperkinetic muscles that result in these unwanted signs of aging. Facial shaping can also be accomplished by injecting botulinum toxin-A in combination with soft-tissue fillers.\textsuperscript{8} Primary injection with botulinum toxin allows for less need to correct creases and folds during subsequent injection of filler. After allowing 2 weeks for the full effect of the toxin to occur, dermal filler injections may be performed.

As patients of color may experience PIH, caution should be taken when administering these noninvasive procedures.\textsuperscript{7} In a survey by Grimes,\textsuperscript{12} 86% of women of color were concerned about hyperpigmentation. It is imperative when injecting soft-tissue fillers in skin of color to abstain from or minimize the use of multiple puncture techniques. In a clinical trial evaluating the safety and efficacy of hyaluronic acid fillers in 150 patients with Fitzpatrick skin types IV, V, and VI, 13% of multiple puncture techniques resulted in hyperpigmentation compared with 2% of linear threading techniques.\textsuperscript{13} Investigators also demonstrated an increased association of PIH to slightly longer injection times.\textsuperscript{15}

When using hyaluronic acid, slower injection rates decrease the incidence of PIH and clinical bruising with occasional subsequent hemosiderin deposition in black patients.\textsuperscript{13} If dyschromia occurs, the most effective mechanism for treatment includes a combination of topical lightening agent, sunscreen, sun avoidance, and chemical peels (preferably salicylic acid or glycolic acid).\textsuperscript{5} In addition, if the dyschromia is related to the hyaluronic acid filler, hyaluronidase may be necessary to dissolve the filler and thus resolve the postinflammatory discoloration. Occasionally, persistent dyschromia may be the result of hemosiderin deposition in where neodymium-Yag lasers would need to be considered for clearance.\textsuperscript{14}

Ethnic skin is 3–18 times more prone to the development of keloid scarring due to larger, multinucleated fibroblasts.\textsuperscript{7} In a clinical trial evaluating the safety and efficacy of hyaluronic acid fillers in 150 patients with Fitzpatrick skin types IV, V, and VI, no patient developed a keloid.\textsuperscript{16} Although keloid formation has not been generally reported with use of injectables, practitioners should use them with caution in patients with history of hypertrophic and keloid scarring.

CONCLUSIONS

Some evidence has shown that beauty is considered to be innate and independent of culture, but a person’s sense of what is aesthetically favorable may also be influenced by his or her age, sex, and ethnicity.\textsuperscript{15,16} This concept remains increasingly important in the modern era because our population continues to age and become ethnically more diverse. Ethnic patients are requesting aesthetic procedures at increasing rates, but the desire for Westernized appearances is not necessarily wanted or suitable by all.

As ethnic patients continue to enter this market in growing numbers, their perception of beauty and cosmetic needs must be taken into account. Variations in photoaging along with aforementioned differences in facial structure and aging contribute to different aesthetic procedures sought by patients in different ethnic groups. Use of specialized aesthetic approaches to their care and understanding cultural and ethnic-specific features are warranted in the treatment of these patients.

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PATIENT CONSENT

The patient provided written consent for the use of her images.

REFERENCES


