

Rhinoplasty for African American Patients

A Retrospective Review of 75 Cases

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Objective: To determine satisfaction, change in self-esteem, and maintenance of ethnic characteristics in African American patients after rhinoplasty.

Patients: African American male (n=21) and female (n=54) patients aged 14 through 58 years (mean, 33.8 years) who underwent rhinoplasty.

Methods: Open structure rhinoplasty, using the 3-tiered approach, was performed on all 75 patients. An anonymous questionnaire addressed postoperative patient satisfaction, maintenance of ethnic characteristics, self-esteem, and nasofacial harmony. The rate of complications was determined by medical record review.

Results: On a scale of 1 to 5 (1, no change; 5, complete change), patients reported a significant degree of preservation of ethnic characteristics (mean, 2.3), high self-esteem (mean, 4.3), and very high satisfaction (mean, 4.6) and facial harmony (mean, 4.3) postoperatively ($P < .001$ for all). The overall complication rate was 2.7%.

Conclusion: In African American patients, 3-tiered open structure rhinoplasty yields high patient satisfaction with a minimal rate of major complications.

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THE NOSE IS THE CENTRAL feature of the face. Therefore, it can easily enhance or detract from overall beauty. In 2005, an American Academy of Facial Plastic and Reconstructive Surgery survey found that, when considering 4 popular cosmetic surgery procedures (rhinoplasty, blepharoplasty, facelift, and chin augmentation), African Americans are most likely getting rhinoplasty (65%).¹ Rhinoplasty, which has been used to make an African American nose look more white, has evolved a great deal as societal understanding of ethnic beauty has increased and surgical techniques for ethnic features have improved.^{2,3}

Various cultures and ethnic groups have different standards of beauty.⁴ In addition, people of African descent typically have noses unlike the typical noses of people of European descent. To achieve a greater degree of facial harmony, a common goal among patients undergoing rhinoplasty, the anatomical characteristics of an African American nose often require a different, more challenging treatment approach than the technique that is suit-

able for white patients. Anthropometric studies confirm the view that characteristic African American features are significantly different than white features.⁵⁻⁹ In their study, Ofodile and Bokhari⁶ conclude that the African American nose is, on average, wider and shorter than a typical European American nose and has an acute columella and nasolabial angle. In our experience, African Americans also tend to have thicker nasal skin with a thick fibro-fatty sublayer and a bulbous fatty nasal tip, weak lower lateral cartilage, and large nostrils in the vertical and horizontal dimensions.

In addition, skin pigment is an obvious difference between African American and white individuals.¹⁰ Any surgical procedure may put African American patients at a greater risk of developing keloids, which may be of concern to African American patients considering cosmetic procedures.¹¹ However, we have seen no cases of keloid formation as a result of rhinoplasty, a conclusion echoed by Rohrich and Muzaffar¹² as well as Patrocino and Patrocino.¹³ Therefore, we consider this concern to be unfounded.

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Ofodile et al¹⁴ conclude that there is a considerable degree of variation among African American noses, which they divide into 3 groups: African, Afro-Caucasian, and Afro-Indian. Although this was not a focus in our study, their categorization draws attention to the importance of an individualized approach to rhinoplasty, such as the 3-tiered surgical technique used in this study.

In our study of 75 African American patients undergoing rhinoplasty, all sought (1) nasal dorsal augmentation to improve inadequate nasal dorsal height; (2) elevation of a depressed nasofrontal angle; (3) refinement of a poorly defined and bulbous nasal tip; and (4) reduction of nasal alar width in the horizontal and vertical dimensions. To address these common issues, we used the 3-tiered approach for all patients.

METHODS

The medical records of 21 male and 54 female African American patients, aged 14 through 58 years (mean, 33.8 years), who underwent open structure rhinoplasty performed by one of us (O.S.) in a private practice setting were examined retrospectively. All patients underwent dorsal augmentation with the custom-carved Silastic SLUPImpant (patent pending) (**Figure 1**), tip refinement using cartilage grafting and defatting of the tip, and vertical and horizontal alar base narrowing.

An anonymous questionnaire was given to all 75 patients who agreed to participate in the retrospective study. The questionnaire addressed self-esteem, preservation of ethnic characteristics, degree of facial harmony, level of media or television influence on the individual's decision to seek rhinoplasty, and overall patient satisfaction postoperatively. The questionnaire's scoring system was based on a Likert scale (1, not at all; 2, below average; 3, average; 4, above average; and 5, very much/to the highest degree).

Of 75 questionnaires, 64 (85%) were completed. Results were analyzed using SPSS statistical software (SPSS Inc, Chicago, Illinois). A 2-tailed, 1-sample *t* test was conducted to establish statistical significance. Complication and revision rates were also recorded to evaluate and further assess the success of the procedure and patient satisfaction with the technique and results.

RESULTS

A total of 75 African American patients underwent rhinoplasty, including dorsal augmentation, tip refinement, and alar base narrowing.

Of 62 patients who completed the postoperative questionnaire, 35 said that their nose was in harmony with the rest of their face to the highest degree after rhinoplasty, 16 rated nasofacial harmony as above average, and 5 said average (mean [SD], 4.3 [1.1]; $P < .001$) (**Table** and **Figure 2**). Overall, 56 patients (90%) reported average or above average nasofacial harmony postoperatively.

Of 61 patients, 47 said their natural ethnic features had been changed by surgery an average amount or less; 26 (43%) reported no change in ethnic features postoperatively (mean [SD], 2.3 [1.4]) (**Figure 3**). Average or above average rating of self-esteem postoperatively was noted by 60 of 63 patients (95%) (mean [SD], 4.3 [0.9]) (**Figure 4**). When asked how well the results of the surgery met their expectations, 61 of 62 (98%) answered

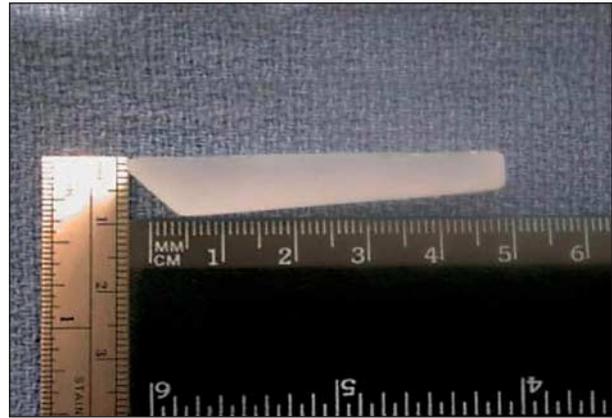


Figure 1. SLUPImpant (patent pending) for dorsal augmentation of the African American nose.

Table. Results of the Questionnaire

Question	No. of Patients	Mean (SD) Score ^a	<i>P</i> Value ^b
Are you interested in changing or enhancing your ethnic features?	60	3.2 (1.4)	.27
Do you feel your nose fits your face?	62	4.3 (1.1)	<.001
How much were your ethnic features changed by having surgery?	61	2.3 (1.4)	<.001
Have you experienced increased self-esteem postoperatively?	63	4.3 (0.9)	<.001
Did the results of the surgery meet your expectations?	62	4.6 (0.7)	<.001

^aA score of 1 indicates not at all; 2, below average; 3, average; 4, above average; 5, very much/to the highest degree.

^bComputed with a 2-tailed *t* test.

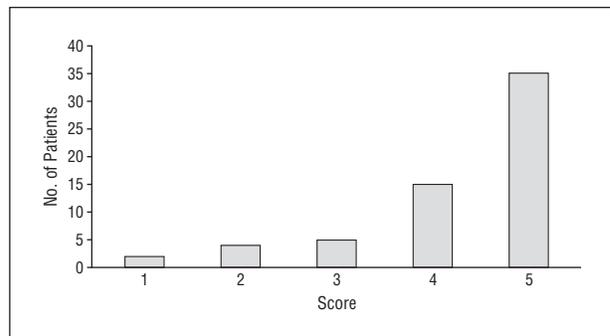


Figure 2. Degree to which patients believe their nose fits their face after rhinoplasty: 1 indicates poor nasofacial equilibrium; 5, the highest degree of nasofacial equilibrium.

average or above average (mean [SD], 4.6 [0.7]; $P < .001$) (**Figure 5**).

One patient developed an infection postoperatively, and the infected implant was later removed. Two patients requested that the height of the custom-carved implant be further decreased because of overaugmentation. After a procedure to revise the implant height, both

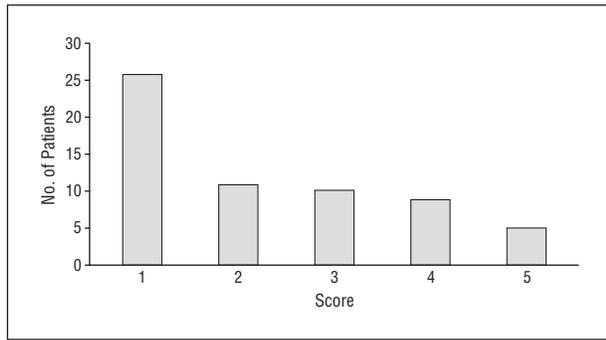


Figure 3. Degree of change in ethnic characteristics after rhinoplasty: 1 indicates no change; 5, a high degree of change.

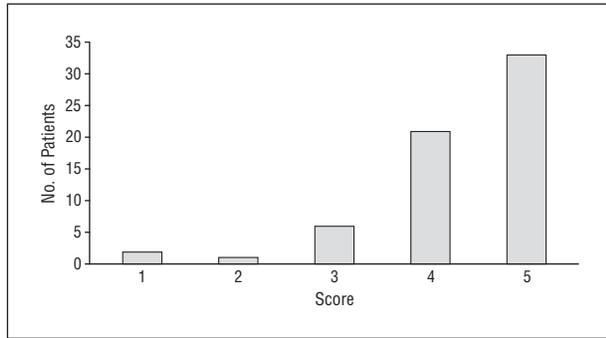


Figure 4. Postoperative increase in self-esteem after rhinoplasty: 1 indicates no increase in self-esteem; 5, the highest increase in self-esteem.

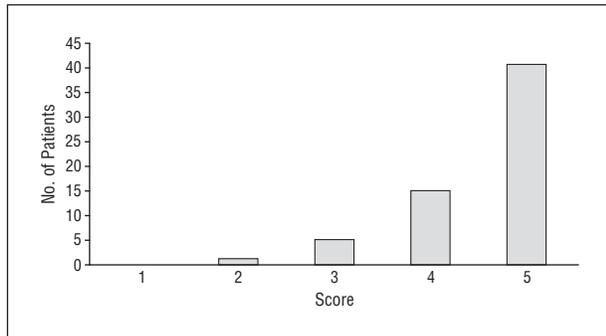


Figure 5. Patients' overall satisfaction with rhinoplasty; 1 indicates not at all satisfied; 5, the highest degree of satisfaction.

patients were satisfied with the results. Poor wound healing in the left alar incisions occurred in 4 patients and was corrected by re-excising and closing the incision after excision to attain narrowing of the nostrils. One patient developed right nostril hypertrophic scarring, which was treated with 20 mg of triamcinolone once a month for 3 months. This patient will also undergo composite auricular skin-cartilage grafting.

COMMENT

Many studies, including that of Rohrich and Muzaffar,¹² have found that rhinoplasty is a challenging procedure, and attaining satisfactory results is difficult.¹⁵⁻¹⁸ It becomes even more challenging when performing rhinoplasty for an African American patient. A surgeon per-

forming rhinoplasty for an African American patient should be able to distinguish the various standards of beauty for different ethnic groups. Only then can the surgeon enhance ethnic features rather than changing them to fit inappropriate standards.¹² When reporting on cosmetic surgery for non-Caucasian noses in 1970, Falces et al stated, "[The] aim of the surgery is to produce a Caucasoid nose."^{2(p317)} This statement is not in agreement with current views on the aim of surgery in African American patients we studied. We agree with Dr Fuselier,¹⁹ who states in her article that the goal of rhinoplasty for African American patients is to enhance natural beauty that brings out ethnic traits.

Many authors agree that African American patients seeking rhinoplasty desire a nose that fits their face and enhances nasofacial equilibrium, rather than changing their ethnic characteristics.^{10,12,18} This view is consistent with the results of our study, which suggest that African American patients are not looking to change their ethnic features; rather, they want a nose that is in harmony with their other facial features.

Successful rhinoplasty starts with a thorough consultation, during which the patient's expectations and the surgeon's abilities are clearly defined. In our opinion, computer imaging is an indispensable tool in assuring realistic expectations, and more important, providing a better understanding of possible results, which leads to high patient satisfaction postoperatively.

The 3-tiered approach to rhinoplasty used in this study strives to enhance nasofacial equilibrium by increasing dorsal height, lessening alar flare, and increasing tip refinement and projection while maintaining ethnic characteristics (**Figure 6A** and **B** and **Figure 7E** and **F**). Most of our patients reported that there was a small amount of change or no change in ethnic characteristics postoperatively. In addition, nearly all patients indicated average or above average satisfaction with the results of rhinoplasty. The high satisfaction rate stems in part from the high degree of postoperative facial harmony and the significant preservation of ethnic characteristics perceived by patients, which in turn leads to high self-esteem postoperatively. We found a significant positive correlation between postoperative facial harmony and satisfaction rate (Pearson product moment correlation coefficient: $r=0.62$; $P<.001$ [directional and non-directional]). We also found a negative correlation between perceived change in ethnic characteristics and satisfaction rate, although the linear correlation is too small to be considered statistically significant (Pearson product moment correlation coefficient: $r=-0.05$; $P<.35$ [directional]; $P=.70$ [non-directional]). Therefore, we consider the level of facial harmony perceived postoperatively to be a major contributor to patient satisfaction. Considering the increase in self-esteem resulting from the 3-tiered approach, we believe this technique successfully addresses the concerns of African American patients seeking dorsal height augmentation, tip refinement, and correction of excessive alar flaring.

The question of whether patients were initially intending to change their ethnic features yielded unexpected results. Although patients recorded a significant maintenance of their ethnic features postoperatively and a very high degree of satisfaction, the mean response about the



Figure 6. Preoperative (A) and postoperative (B) profile and three-quarter (C and D) views of an African American patient. Photos display postsurgical increase in tip definition, augmentation of the nasofrontal angle, and increased dorsal height.

desire for rhinoplasty to alter ethnic characteristics was 3.2, or “average.” This result could be due to poor wording of the question, or perhaps some African American patients do initially want to change the ethnic characteristics of their nose. However, the resulting high satisfaction postoperatively, along with the significant degree of preservation of ethnic characteristics, is not consistent with the idea that a desire to alter ethnic characteristics motivated patients to elect the procedure. Further research is needed to gain more insight into this inconsistency.

Of 75 African American patients who underwent rhinoplasty, 2 experienced major complications: 1 developed an infection, which necessitated implant removal, and 1 developed hypertrophic scarring occurring in the right alar horizontal incision, which necessitated composite grafting. The other 6 complications were minor and included 2 requests for reduction of augmented dorsal height, both of which were revised successfully, and 4 scar revisions occurring in the left alar horizontal incision, all of which were later revised successfully under local anesthesia. The overall complication rate was 2.7%.

CONCLUSION

The 3-tiered approach to rhinoplasty for African American patients, which includes dorsal augmentation, tip

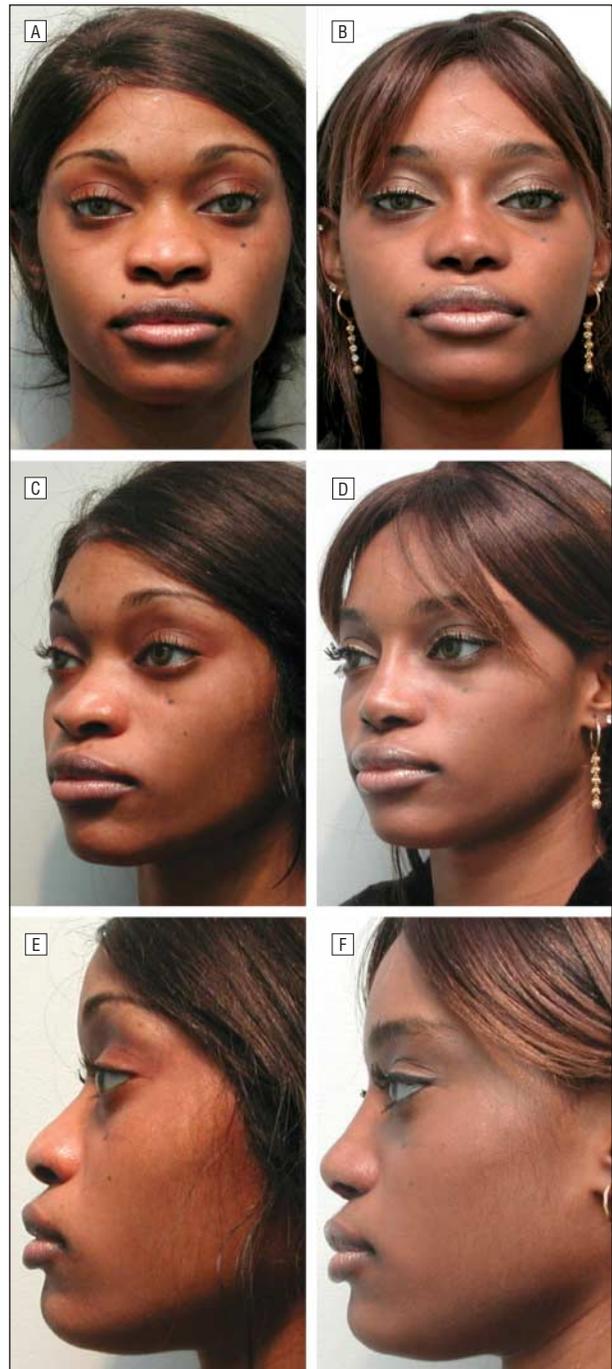


Figure 7. Preoperative and postoperative frontal (A and B), three-quarter (C and D), and profile (E and F) views of an African American patient. Photos display decreased alar flare (nostril width and height), dorsal augmentation, and increased tip definition (decreased bulbousness of the tip).

refinement, and vertical and horizontal alar base narrowing, results in maintenance of racial congruity and yields high patient satisfaction with a minimal rate of major complications.

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