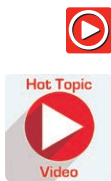


Face Lifting in Bald Male Patients: New Trends and Specific Needs

Michele Pascali, M.D., Ph.D.
Chiara Botti, M.D.
Giovanni Botti, M.D.

Rome and Salò, Italy



Background: Aesthetic surgery has recently become popular also among men. The ever-increasing number of bald men wishing to undergo facial surgery represents a challenge for the surgeon, as the scars cannot be hidden in the hair and must therefore be as short as possible. The authors present their experience in face lifting in bald male patients and propose an innovative technique to handle the skin excess to achieve practically invisible scars.

Methods: A 10-year observational study was carried out on 68 bald male face-lift patients. All patients underwent deep plane lifting with a specific method for handling skin excess. This technique is the innovation presented in this article. Subjective and objective methods were used to evaluate the results. The well-known FACE-Q questionnaire was sent to all the patients together with an explanatory letter. Three ad hoc questions were added to the questionnaire to assess the degree of satisfaction with the scars. The objective method involved the evaluation of preoperative and postoperative photographs by a three-member jury. The average follow-up period was 12 months.

Results: All patients showed a high degree of satisfaction with the final appearance of the surgical scars and appreciation of the overall quality of the result, 1 year after face-lift surgery. No patient expressed regret about choosing to undergo this type of surgery. Very high scores were registered for the overall facial appearance and for the various critical areas examined, including scars, from patients and experts alike.

Conclusion: The face-lifting technique for bald men proposed by the authors, involving a peculiar and innovative way of handling the skin excess, has proven to be reliably effective in obtaining virtually invisible scars. (*Plast. Reconstr. Surg.* 145: 60, 2020.)

Aesthetic surgery has enjoyed increasing popularity among men in the past few years.^{1,2} International Society of Plastic Surgery data on gender distribution for cosmetic procedures in 2016 show 61,042 male requests for face lifting (14.35 percent of the total) and 50,735 for neck lifts (19.2 percent of the total).³

Baldness unquestionably represents a challenge for the face-lift surgeon. Baldness is related to age in Caucasian men, with 50 percent affected by the age of 50 years and older to 80 percent by the age of 70.⁴⁻⁶

In the bald patient, every single scar is of crucial importance because it cannot be concealed. The lack of hair, in fact, makes it necessary to limit

the length of skin incisions to the bare minimum, and this requires careful planning. Although the literature includes various articles on male face-lifting that discuss the differences from female patients in terms of psychology, anatomy, and surgical technique,^{1,2,7-14} there appear to be none at present that focus on the peculiarities of bald male patients.

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From the Department of Plastic and Reconstructive Surgery, University of Rome “Tor Vergata”; and the Villa Bella Clinic. Received for publication August 29, 2018; accepted April 30, 2019.

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The purpose of this article is to demonstrate the efficacy of the face-lifting technique proposed by the authors for bald men, to minimize the length of the cutaneous scars. In particular, it is key, at the end of this operation, to redistribute the longer lower skin flap edge along the shorter initial incision. The technique for managing this issue is certainly the most important innovation introduced by this article.

PATIENTS AND METHODS

Seventy-five bald male patients, aged between 42 and 73 years (average age, 55 years), who underwent face lifting between January of 2006 and January of 2016 were selected. Seven were found on review to have incomplete charts and therefore eliminated from the study, leaving a total of 68.

Given the aims of the study, patients with cutaneous diseases that might have biased the healing process and patients already bearing the scars of previous face lifts were also excluded, as was anyone with unreasonable or unrealistic expectations. All the smokers were asked to quit for at least 1 month, both before and after the operation.

The postoperative follow-up was 12 to 24 months (average, 18 months). Position, facial expression, focal distance, and camera settings were standardized. All of the patients were reviewed for the incidence of seroma, hematoma, skin slough, infection, and nerve injury.

Subjective and Objective Evaluations

Subjective and objective methods were used to evaluate the results of the operations. The subjective method was self-assessment obtained from 68

patients through a questionnaire 12 months post-operatively, once the surgical results were considered stable. The authors regard the FACE-Q as a valid tool for the evaluation of patient satisfaction and outcomes.¹⁵⁻¹⁷ Furthermore, considering the focus of this article, a specific section was added to assess the appearance and the extent of scars. The objective method was instead a questionnaire for the evaluation of preoperative and postoperative photographs by a three-member jury consisting of a plastic surgeon, a maxillofacial surgeon, and a makeup artist. Six questions were asked about the overall facial appearance and one specific question was asked about the quality and extent of the scars (Table 1).

Surgical Technique

Preoperative Evaluation

When planning a face lift, the characteristics of both hard and soft facial tissues should be carefully examined, and specific defects such as jowls, platysma bands, malar bags, and nasolabial and labiomandibular grooves identified. It is then necessary to estimate the amount of skin excess to be removed. If the skin excess and lassitude are beyond the limits that could be treated with a short-scar technique, there are two options: one can still opt for a short incision, asking the patient to come back for an incidental scar revision to remove extra wrinkles; or one can propose a more extended incision (as in traditional approaches) from the start. Also, when dealing with extremely fat necks, one must take into consideration that, after performing liposuction, there will be a lot of skin redundancy, to be adequately addressed.

Table 1. Modified FACE-Q Questionnaire Used for the Subjective Evaluation

Patient	Question	Answer
1	Age	Age
2	Satisfaction with facial appearance overall*	0 (very bad) to 10 (very good)
3	Satisfaction with cheeks*	0 (very bad) to 10 (very good)
4	Appraisal of nasolabial folds*	0 (very bad) to 10 (very good)
5	Satisfaction with lower face and jaw line*	0 (very bad) to 10 (very good)
6	Appraisal of area under chin*	0 (very bad) to 10 (very good)
7	Appraisal of neck*	0 (very bad) to 10 (very good)
8	Social function	0 (very bad) to 10 (very good)
9	Psychological well-being	0 (very bad) to 10 (very good)
10	Early life impact	0 (very bad) to 10 (very good)
11	Aging appraisal VAS, yr	Age
12	Satisfaction with outcome	0 (very bad) to 10 (very good)
13	Satisfaction with decision	0 (very bad) to 10 (very good)
14	Scars extensions correspond to expectations	0 (opposite to expectations) to 10 (equal to expectations)
15	Satisfaction with scar quality*	0 (very bad) to 10 (very good)
16	Recognizing face-lift from scars (from others)	Yes or no

VAS, visual analogue scale.

*Similar question to the team of experts.

Implants and/or fat grafting are to be considered when a volume increase of the soft tissues or of the underlying osseous structures is needed. When indicated, filling techniques make it possible to reduce—albeit only moderately—the amount of skin to be resected and, consequently, the final length of the scars.

The absence of hair makes it essential to minimize cutaneous scars. In the retroauricular/occipital portion, the rule is to avoid extending the scar beyond the projection on the mastoid of the posterior edge of the helix. The posterior transversal section should therefore be no longer than approximately 2 cm. Behind the ear, the scar should be placed over the concha (approximately 5 mm from the groove), as it always tends to slip downward in the first 6 months after the operation.

The incision continues anteriorly around the auricular lobe and upward into the tragal region, where it can proceed along the posterior margin of the tragal cartilage (retrotragal incision), in the pretragal groove (pretragal incision), or along the posterior edge of the sideburn/beard (Fig. 1). The patient should be involved in deciding which one to adopt. If a retrotragal incision is preferred and consequently the hair-bearing skin is moved over the tragal cartilage, it is necessary to eliminate the follicles in this area, surgically or by laser/intense pulsed light epilation. The pretragal incision is most frequently used by the authors. It leads to almost invisible scars and it is to be preferred in

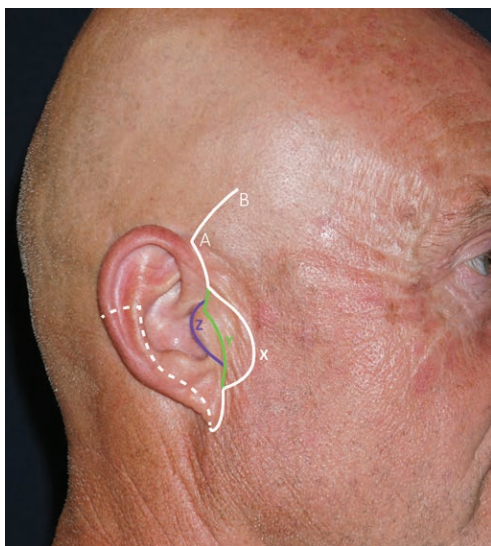


Fig. 1. Illustration showing the different incision pattern. z, retrotragal incision; y, pretragal incision; x, prebeard incision; note the short temporal extension (A to B) and the retroauricular portion limited to the projection of the helix posterior border.

the presence of a clearly defined pretragal groove. Finally, in cases where the beard is thick and dark, and its posterior edge therefore particularly evident, an incision at this level would be less visible and can therefore be considered as well.

In any case, whatever the decision, it is essential for the incision not to be linear, but preferably interrupted in at least two points above and below the tragus. Moving cephalad, the scar then follows the anterior margin of the helix before kinking slightly posteriorly. The temporal extension of the scar will be as short as possible and proportional to the amount of skin to be removed. Although it can even be avoided when this amount is moderate, it is indispensable in the majority of cases for an adequate redistribution of the different lengths of the two cutaneous edges to be sutured.

The temporal extension (on the scalp or along the hairline) can be traced with a moderate bend forward (approximately 120 degrees) of 2 to 4 cm (Fig. 1). Nevertheless, most of the skin excess will have to be redistributed primarily in the retroauricular area, where any wrinkling can be concealed and tends to disappear in time. Moreover, should a hypertrophic scar form (possibly also because of the different lengths of the skin margins to be sutured), it may easily be hidden by the ear or removed.

Surgical Technique

All the patients involved in this study underwent general anesthesia. Each hemiface was infiltrated (subcutaneously) with 100 cc of a saline solution with 0.25% mepivacaine, 500 mg tranexamic acid, and 1:500,000 epinephrine. The protocol used by the authors in male face lifting involves the application of a clonidine transdermal patch (Catapres TTS-2 5 mg; Boehringer Ingelheim, Ingelheim am Rhein, Germany) 6 hours before the start of the operation except in the rare cases of hypotensive patients.

The skin incisions, made according to the preoperative markings, are followed by a subcutaneous dissection, which will be as narrow as possible in the preauricular region (6 to 7 cm) and wider (8 to 10 cm) in the retroinfraauricular area. Male patients tend to bleed more; therefore, it is essential to limit the chances of developing a hematoma by avoiding any overextended subcutaneous undermining.

In those cases where the incision in the temporal area must be extended, it is preferable to dissect along the subfascial plane down to the hairline. A high superficial musculoaponeurotic system (SMAS) procedure^{18,19} is preferred except

Table 2. Procedures

Procedure	No. of Patients
Main procedures	
High SMAS	70
Low SMAS	5
Midface	0
Ancillary procedures	
Liposuction	
Submental area/neck	28
Blepharoplasty	
Upper	57
Lower	43
Lipofilling	65
Temporal area	28
Malar area	33
“Tear trough” deformity	47
Nasolabial folds	40
Gonial angle/mandibular line	19
Postsurgical treatment	
Residual telangiectasia	
IPL treatment	5
Scar revision	
Triamcinolone injection	2
Surgical revision	3

IPL, intense pulsed light.

for when an implant or a fat graft is to be used in the zygomatic region or when a midface lift is also required,²⁰ in which case a regular SMAS technique is carried out (Table 2).

The sub-SMAS dissection is extended bilaterally to the midline in the neck but limited in the cheek to the right amount required to obtain a satisfactory flap mobilization (Fig. 2). In most cases, the zygomatic ligament is released to obtain adequate correction of jowls and nasolabial fold. The shifting and repositioning of the SMAS flap is carried out mostly in a superior or superolateral direction. The authors prefer lifting the SMAS along a purely vertical vector in case of marked soft-tissue sagginess in the lower portion of the neck. When priority is instead given to achieving a sharper cervical angle, a superolateral vector is considered more effective; therefore, the SMAS flap is divided in two parts, one moved in a vertical direction and the other in a posterosuperior direction.²¹

Finally, to ensure a stable result, it is essential to secure the SMAS flap to solid structures such as the periosteum of the mastoid region posteriorly, Lore’s fascia in front of the earlobe, the periosteum of the posterior third of the zygomatic arch, and the deep temporal fascia (Fig. 3). The SMAS flap is used as a suspender to lift all soft tissues, with virtually no tension on the skin margins and minimal dead space.²¹ This allows prevention of an unnatural flattening of the posterior portion of the cheek and malar areas and also avoidance of the formation of hypertrophic scars in the preauricular region.



Fig. 2. The deep dissection behind the SMAS reaches bilaterally the midline in the neck but is limited in the cheek to the extent required to obtain satisfactory mobilization of the flap.



Fig. 3. It is essential to secure the SMAS flap to solid structures such as the periosteum of the posterior third of the zygomatic arch.

The routine use of fibrin glue^{22,23} minimizes the incidence of hematomas and ensures greater adaptability of the cutaneous flap. The anterior portion of the skin flap is moved mainly in a horizontal or slightly posterosuperior direction to avoid having to extend the temporal scar cephalad. The posterior portion of the flap must instead be rotated superomedially so that the posterior scar can be short enough to be completely hidden by the ear. This way, most of the difference in length of the two cutaneous edges is distributed in the retroauricular area (Figs. 4 and 5).

After applying the preauricular and retroauricular cutaneous key sutures, multiple short skin incisions are performed perpendicular to the cutaneous flap’s margins and then joined at their base to carve out the right amount of extra skin. Fibrin



Fig. 4. The anterior portion of the cutaneous flap is moved mainly in a horizontal or slightly posterosuperior direction to avoid any cephalic extension of the temporal scar.



Fig. 6. Note the even distribution of the two wound borders. The visible skin is flat, without any evident crease.



Fig. 5. The posterior portion of the flap must instead be rotated superomedially to limit the extent of the posterior scar exclusively to the area covered by the ear. In this way, most of the difference in length of the two cutaneous edges is absorbed in the retroauricular area.

glue (Tisseel; Baxter Healthcare Corp., Deerfield, Ill.) is applied only after the undermined area has been carefully dried with gauze and air spray.

During the first minute after glue application, the skin margins can be guided by one's fingertips into the best position to obtain a perfect match. Finally, the skin is sutured with 5-0 and 6-0 nylon (Fig. 6).

A moderately compressive dressing is applied and removed 12 hours later to check that there are no blood collections. The protocol used by the authors involves the use of clonidine for male patients even if they have no history of hypertension. It is crucial to prevent postoperative hypertension peaks by means of an adequate analgesic

coverage and avoiding excessive fluid administration. [See Video (online), which demonstrates a face lift in a bald man.]

RESULTS

Subjective and Objective Judgment Scores

A very good satisfaction level was registered with this type of face lift. Representative outcomes are shown in Figures 7 and 8. The results of subjective and objective assessment were similar, with very high scores for all the questions in both cases (Table 3). The highest score was awarded by both the patients (mean, 8.76) and the expert jury (mean, 8.95) to the “neck,” followed by “area under chin” (mean, 8.43 recorded from patients; mean, 8.54 from expert jury), “lower face and jaw line” (mean, 8.12 recorded from patients; mean, 8.47 from expert jury), “cheeks” (mean, 8.07 recorded from patients; mean, 8.42 from expert jury), and “nasolabial folds” (mean, 7.87 recorded from patients; mean, 7.57 from expert jury). All evaluations are therefore clearly above sufficiency; this result is also found in the “satisfaction with facial appearance overall” reporting a mean value of 8.62 ± 1.172 for the subjective evaluation and a mean of 8.41 ± 0.859 for the objective evaluation.

Comparing the answers to each question for both groups in terms of the Pearson coefficient, a positive correlation between overall satisfaction with facial appearance (0.73) and overall quality of scars (0.79) was found. Lower correlations are also registered in evaluations of the specific parts of the face. No patient expressed regret about deciding to undergo this type of surgery. All the registered results reported values above



Fig. 7. Photographs obtained preoperatively (*left*) and 12 months postoperatively (*right*) of a 56-year-old man who underwent deep-plane high SMAS face lift.

sufficiency, with scores of 8 to 10 in 76 percent of the cases and the maximum in 34 percent (23 patients). Satisfaction with decision presented high positive correlation with overall satisfaction with facial appearance (0.847) and with satisfaction with outcome (0.889). A high score for this question also implies that other people could not understand that a face lift had been carried out. The visibility of the scars is key in determining this aspect. In only 10 percent of the cases were the scars appreciable by nonmedical observers. The score on the overall quality of the scars was also very high both for patients and for the jury (Fig. 9). In the subjective judgment, only 2 percent of cases report insufficient scar quality, not

up to the expectations after 12 months, whereas the remaining 98 percent report scars in line with expectations and with very high overall quality; 67 percent of patients reported an overall assessment of scar quality after 12 months between 8 and 10 and 35 percent between 9 and 10. The team of experts instead judged insufficient (with a score of 5) one case only (1 percent) for scar quality after 12 months, attributing in 68 percent of cases a value between 8 and 10 and in 40 percent a value between 9 and 10.

Postsurgical Complications

There were no major complications in any of the cases. Two patients presented hematomas 12

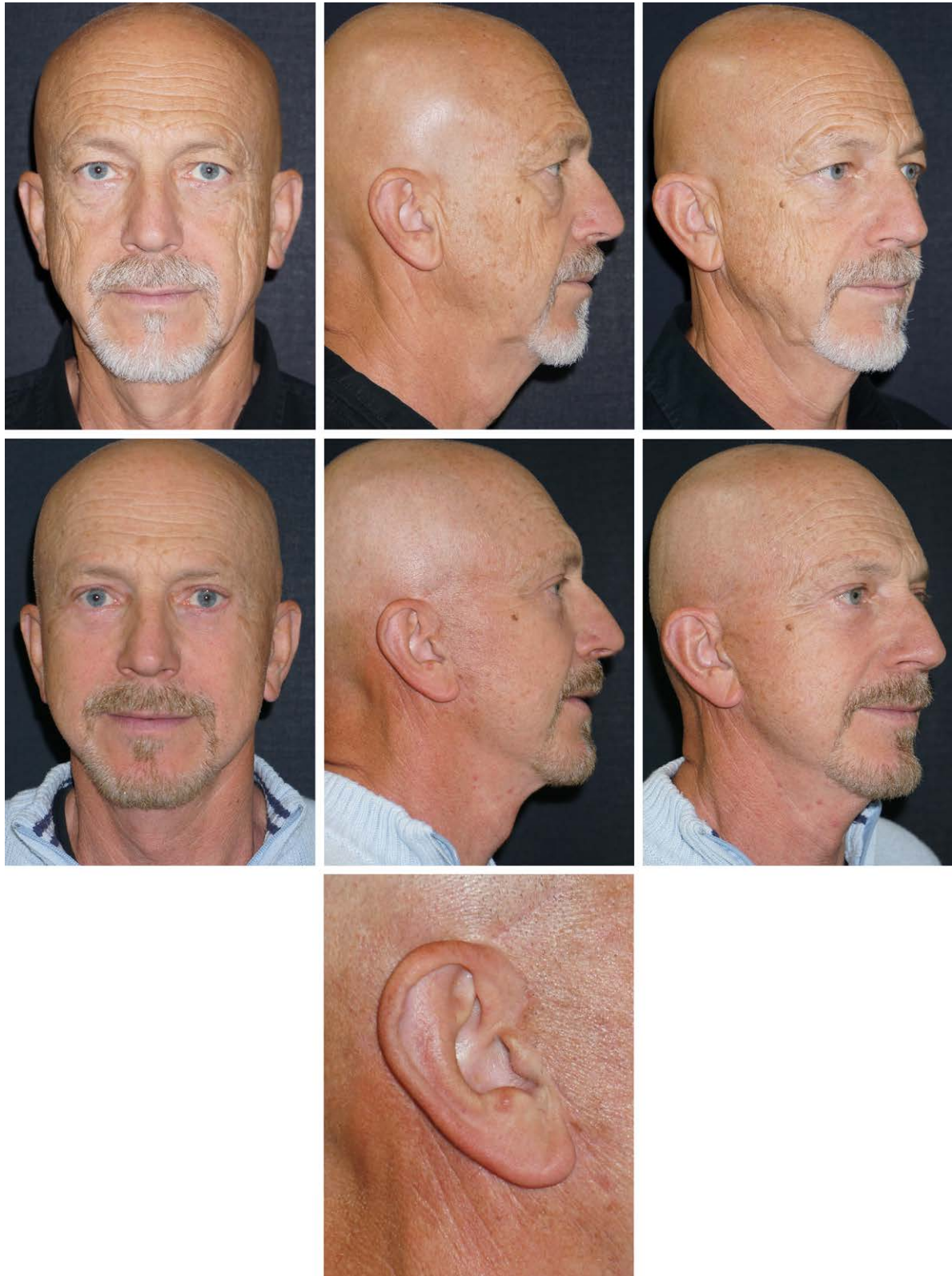


Fig. 8. Photographs obtained preoperatively (*above*) and 18 months postoperatively (*center*) of a 67-year-old man who underwent deep-plane high SMAS face lift. Note in *below* the quality of the scar that is almost invisible in the temporal region and totally absent behind the posterior border of the helix. A little wrinkling is noticeable in the preauricular region, in front of the lobule, but the patients are normally very tolerant of this minor fault. A longer scar would instead be less easy to accept.

Table 3. Comparison of Patient and Jury Scores

Patient	Question	Patient Score from 0–10 (mean ± SD)	Jury Score from 0–10 (mean ± SD)†
1	Age	55 ± 8.13	—
2	Satisfaction with facial appearance overall*	8.62 ± 1.172	8.41 ± 0.859
3	Satisfaction with cheeks*	8.07 ± 0.997	8.42 ± 0.774
4	Appraisal of nasolabial folds*	7.87 ± 0.976	7.57 ± 0.742
5	Satisfaction with lower face and jaw line*	8.12 ± 0.985	8.47 ± 0.714
6	Appraisal of area under chin*	8.43 ± 1.027	8.54 ± 0.845
7	Appraisal of neck*	8.76 ± 1.024	8.95 ± 0.806
8	Social function	7.79 ± 0.856	—
9	Psychological well-being	8.54 ± 1.112	—
10	Early life impact	7.18 ± 0.897	—
11	Aging appraisal VAS	9.65 ± 1.945	—
12	Satisfaction with outcome	8.40 ± 1.108	—
13	Satisfaction with decision	8.49 ± 1.377	—
—	Scars extensions correspond to expectations	8.60 ± 1.135	—
15	Satisfaction with scar quality*	7.94 ± 1.359	8.06 ± 1.243
16	Recognizing face lift from scars (from others) (yes or no)	Yes, 7; no, 61	—

VAS, visual analogue scale.

*Similar question to the team of experts. Highest rating was assigned in both cases to neck. Lowest rating was assigned in both cases to nasolabial folds.

†Values are the mean of the three independent judgments.

Satisfaction with scars quality

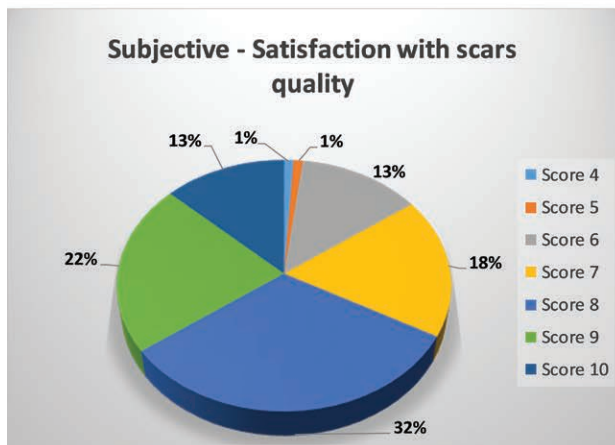


Fig. 9. In the subjective judgment, only 2 percent of cases report scar quality insufficient and not corresponding to expectations after 12 months; the remaining 98 percent report scars in line with expectations and with very high overall quality. In objective judgment, only 1 percent of cases are insufficient for scar quality after 12 months. There is an average uniformity of judgment in the evaluations expressed by the patients and by the jury members for the evaluation of the quality of the scars.

hours after the operation. One required surgical evacuation and the other was removed by means of a microcannula. Two patients presented a transient palsy (buccal branch) that resolved spontaneously in 1 week and in 3 months, respectively. Five cases developed hypertrophic monolateral retroauricular scars. In two of these, satisfactory improvement was obtained with injections of triamcinolone in accordance with the standard protocols. In the other three, the scar tissue was excised to obtain a new good-quality scar. In this series, there were no cases of postoperative dog-ears, because all patients underwent careful preoperative evaluation and selection. It should be nonetheless noticed that this is a possible complication, when the extra skin to be resected exceeds the possibility of being treated with a short-scar technique.

DISCUSSION

In current times, men also seek a youthful and attractive appearance.¹¹ Whereas a tailor-made suit can be bought and a fit body maintained through constant exercise, a young, line-free face can be obtained only through surgery. A fresher and more youthful appearance can also mean greater credibility and success in professional terms.

Male face-lift patients have specific issues connected with psychological and anatomical aspects.¹ Most men who decide to undergo a face lift have busy professional lives and therefore little time for convalescence. The specific demands made by male patients are often hard for the surgeon to meet because, although they insist on the shortest possible recovery period, which would imply minimally invasive procedures, they also want good, natural-appearing, and long-lasting results,¹¹ which call for more aggressive techniques. Moreover, men worry that doubt will be cast on their virility if it is realized that they have undergone cosmetic surgery.

In addition to these psychological considerations, there are also important anatomical peculiarities. On one hand, the presence of beard in the neck and cheeks eliminates all concerns connected with sideburn raising,²⁴ because the hair can regrow at the desired level in case it is moved upward. On the other hand, the presence of beard plays a role in deciding the incision site, as the follicles moved in a superoposterior direction when repositioning the flap will inevitably grow and therefore have to be shaved also behind the ear lobe. It will also be necessary to decide carefully together with the patient what incision is more advisable.

Subcutaneous dissection normally causes more bleeding in male patients because of the presence of highly vascularized beard follicles. Although this means greater risk of hematoma,^{11,25} the authors have found that the routine use of fibrin glue makes it possible to minimize the collection of blood also in male patients.²³

Another point to be noted is the fact that men are statistically less healthy than women. Men have a higher incidence of cardiovascular and pulmonary problems, especially at the age when patients seek face-lift procedures. All patients must be screened for any possible pathologic conditions preoperatively and effectively treated before surgery takes place.¹¹ The most important aspect to be taken into consideration is, however, unquestionably the fact that over 50 percent of men, unlike women, lose some of their hair as they grow older.^{5,6} This certainly increases the technical challenges of face lifting, as it becomes almost impossible to hide the scars. The solutions developed and standardized by the authors appear to offer an adequate way of coping with this problem.

A review of the literature^{1,2,7-14} shows that, at present, no article focusing primarily on bald male face lift has been published. Several modifications of short-scar face lift^{26,27} have been discussed by others, including the use of serrated incisions along the hairline, but in the authors' opinion, they are not suitable in bald men, where there is no hair by definition.

The authors do not regard "mini-lift" procedures involving limited undermining and/or threads as effective solutions for this problem. As for "liquid lifts," they are not considered an adequate solution, because they unavoidably alter facial volumes, thus changing the patient's features in a way that is not always well accepted by men. The technique proposed in this article, which involves short cutaneous scars combined with adequate dissection and lifting of the SMAS, makes it possible to obtain excellent results that meet the expectations of bald male patients.

The authors focus primarily on reducing the length of the scars to the bare minimum. A geometric method similar to that used in abdominoplasty cannot unfortunately be applied to face lifting. Dividing the two edges into equal parts for an even "mathematical" redistribution would in fact lead to an excess of skin also in the preauricular region, where it is instead essential for the two edges to be identical in length to get a perfect scar. Extending the incision in the occipital or temporal area does not appear as a good solution either.

To obtain optimal matching of the two margins, it is essential to redistribute the difference in length so that it is mostly gathered in the retroauricular region, where any wrinkling can be concealed and tends to disappear over time. Moreover, any incidental hypertrophic scar can easily be hidden by the ear.

When one has to deal with a large amount of skin in the preauricular region and a horizontal rotation of the flap proves inadequate, a temporal elongation of the incision is necessary to avoid the formation of unsightly dog-ears. This extension must be kept as short as possible and never exceed a length of 3 to 4 cm.

The results of the present study show a high degree of patient satisfaction, both for what concerns the scars and for the overall facial appearance. Attention should also be paid to the average consistency of the judgments expressed both by the patients and by the jury members regarding scar quality. The price to pay for these short scars is a slightly more complex management of cutaneous excess; therefore, when scars are easy to hide in the hair, the authors keep on using “traditional” incisions.

CONCLUSIONS

Concealing face-lift scars in bald male patients while ensuring natural and long-lasting results is a challenge in aesthetic surgery. The technique proposed by the authors consists of a deep plane lift with SMAS fixation to stable structures, combined with a specific and innovative way of handling skin excess to obtain virtually invisible scars.

Michele Pascali, M.D., Ph.D.

Via Novara 53

00198 Rome, Italy

mic.pascali@gmail.com

Instagram: @drmichelepascali

Facebook: Michele Pascali - Chirurgia Estetica

PATIENT CONSENT

Patients provided written consent for the use of their images.

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