Correction of the Nasolabial Fold: Extended SMAS Dissection with Periosteal Fixation

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The nasolabial fold has defied satisfactory correction with the face lift operation. This is despite variations of the SMAS technique over the last 20 years. In this study, the nasolabial fold is shown to be part of the overall aging deformity that affects the cheek and perioral region.

The key to surgical correction, not previously appreciated, is the complete release of the anterior SMAS from the zygoma and zygomaticus major muscle. This allows a dramatic mobilization of the nasolabial fold without tension. The advanced SMAS is then reattached to the zygomatic periosteum by a series of permanent sutures. Each suture, by its location and direction of lift, corrects one of the four nasolabial regions including the jowl.

The relevant anatomy is reviewed and the safety of the procedure is assessed in a personal series of 135 patients. It is concluded that the two principles of this technique, i.e., complete SMAS release and reattachment to the zygoma, safely and effectively achieve a natural-appearing rejuvenation of the cheek and nasolabial fold.

In correction of the aging face, it is over 20 years since Skoog[1,2] introduced the anatomic premise of repositioning the "subcutaneous fat layer with its fascia, as well as the cutaneous muscles of the neck and face." This proved to be a landmark in the understanding and correction of the aging face. While the role of the superficial musculoaponeurotic system (SMAS) is now well established in the correction of cervicomental aging changes, surgeons have not been able to achieve a similar quality of correction of the nasolabial fold using the SMAS.[3,4] Reflecting the dissatisfaction with the correction achieved with SMAS surgery, Millard et al.[5] recommended that nasolabial correction be achieved by superficial surgery only, i.e., wide skin undermining and excision of the fat of the fold.

This paper analyzes the reasons for the failure of previous SMAS surgery in correction of the nasolabial fold. Based on an understanding of the anatomy of the SMAS, a method is described that logically addresses the previous limitations.

Observations on the Nasolabial Fold in Aging

In simple terms, the face can be considered as consisting of two zones. The division between the zones is approximately a line descending from the lateral orbital rim. The outer zone reflects the underlying function of mastication. Here the two large underlying muscles, the temporalis and the masseter, course parallel to the skin between their bony attachments. Also here are the zygomatic arch and the parotid gland.

The central zone has to do with facial expression. The small mimetic facial muscles originate from the underlying body of the zygoma and the central part of the jaws (maxilla and mandible) to attach to the skin of this zone. The skin and SMAS of the central zone are inherently more mobile than those of the masticatory zone, as required for facial expression. Also, in opening the jaws, more movement occurs centrally around the mouth than in the preauricular area overlying the temporomandibular joint.

The mobility of the tissues of the central zone predisposes them to the development of laxity with aging. Only when aging changes have developed to a considerable degree centrally do they extend across to the zone of mastication.

Within the central zone, the nasolabial crease separates the medial cheek from the perioral region. The nasolabial crease itself is a "defor-

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mity" of the dermis located in the center of what becomes, with aging, the nasolabial furrow. The youthful cheek tends to have a continuous convexity transversely from the arch of the zygoma around to the nasolabial crease. Medial to the crease, the upper and lower lips also have a somewhat even curvature (Fig. 1).

With aging, this even biconvex contour of the youthful face becomes broken up into a series of folds (convexities) and furrows (concavities), of which the nasolabial is the most obvious (Fig. 1, *right*). In the midcheek, the youthful rounded fullness is progressively lost. Initially, this may not be obvious as the fullness becomes a flatness. Ultimately, the hollowing shows up as an obliquely oriented midcheek furrow.

The midcheek furrow bisects the previously rounded cheek. As it does, the medial aspect of the malar eminence becomes visible as a separate entity, as does the nasolabial fold. Accordingly, nasolabial fullness is part of a complex change developing pari passu with development of the midcheek furrow.

With the laxity associated with aging, the obliquely oriented folds and furrows gravitate medially to form a concertina-like gathering. The height of the folds and depth of the furrows become progressively more pronounced, and they develop a more vertical orientation as they crowd the perioral area.

The cheeks appear larger with aging, partly due to the nasolabial furrow moving medially toward the lip. The upper lip, which is relatively flat in youth, becomes more raised and rounded as a fold. As this descends inferomedially over the lateral oral commissure, the mouth appears smaller, another of the subtle signs of aging.

Whereas the oral commissure is short and transverse in youth, with age it develops a "down at the mouth" look. The fullness and downward displacement of the upper lip fold changes the commissure, which appears deeper and longer and droops down to become the marionette furrow. In some individuals, the marionette furrow merges laterally with the nasolabial fold and contributes to the pouchlike fullness in area 3 (Fig. 2).

The lower lip also changes with significant medial cheek displacement. It loses its flatness to become more of a rounded fold that exaggerates the depth of the marionette furrow forming its lateral boundary. The mental crease also becomes deeper, longer, and downturned, as the labiomental groove.

In surface appearance, the nasolabial fold is a longitudinal area bounded medially by the nasolabial crease. The lateral boundary tends to be less distinct. In youth, there may not be a visible distinction between the nasolabial fold and the midcheek. A cheek dimple, when present, demarcates the site of this boundary. On smiling, a dimple shows an oblique crease that is located at the center of what becomes, with aging, the midcheek furrow.

The internal anatomy of the nasolabial fold has recently been studied.[5,6] Both the midcheek

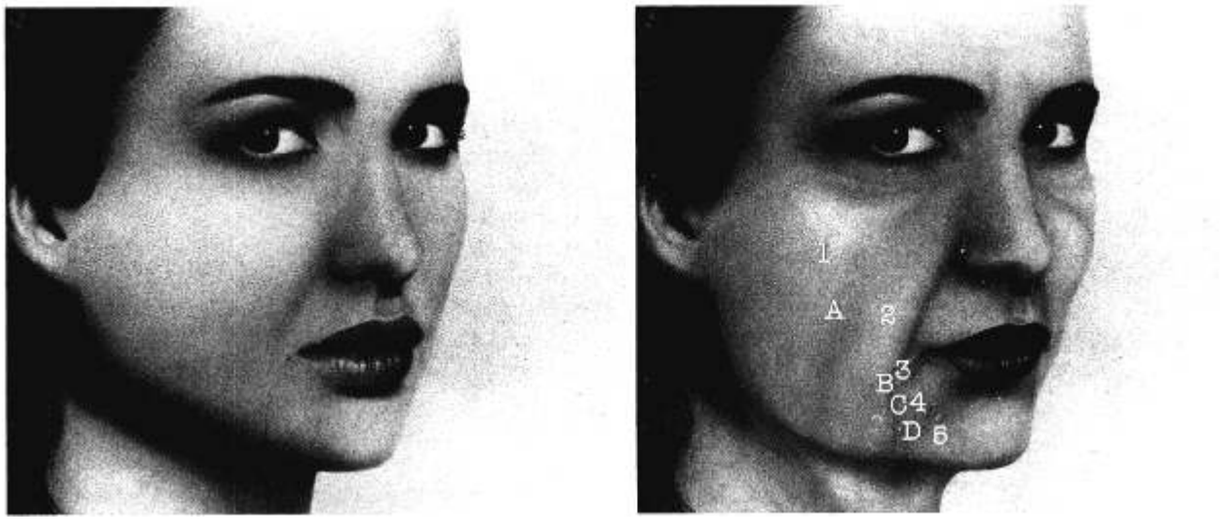

FIG. 1. (*Left*) A youthful face has an even convex contour of cheek and lip separated by the nasolabial crease. (*Right*) With aging, the contours develop a series of furrows (*letters*) separating the convexities or folds (*numbers*). *A*, midcheek furrow; *B*, nasolabial crease and furrow; *C*, marionette furrow; *D*, labiomental groove; *1*, malar eminence; *2*, nasolabial fold; *3*, upper lip fold; *4*, lower lip fold; *5*, chin.

FIG. 2. The four areas of the nasolabial fold: area 1, paranasal; area 2, lateral to the upper lip; area 3, the pouch lateral to lower lip; and area 4, jowl.

crease (dimple) and the nasolabial crease are rendered more prominent by underlying muscle activity, as in smiling. This suggests that the SMAS has specific attachments to the dermis at the dimple crease, as it does to the dermis of the nasolabial crease. In other words, the medial and lateral boundaries of the nasolabial fold correlate with internal SMAS attachments. The location of the midcheek furrow coincides with the previously mentioned division between the outer masticatory zone and the inner zone of facial expression.

The longitudinal area of the nasolabial fold can be thought of as comprising four overlapping areas. Each area is defined by its relation to the anatomy medial to the nasolabial crease (see Fig. 2).

Area 1: Lateral to the nose (paranasal)
Area 2: Lateral to the upper lip
Area 3: Lateral to the lower lip (pouch)
Area 4: Lateral to the chin (the jowl)

The traditional subcutaneous dissection face lift obtains the maximum benefit nearest the incision, i.e., at the most peripheral part of the masticatory zone, that part which shows the least aging changes. While some benefit is transmitted to the central zone by skin tension, etc., the benefit to the central zone is at the expense of the masticatory zone in the sense that the preauricular skin is made unnaturally tight. While this may not create a visible deformity, it is inherently incorrect to have the preauricular skin youthfully tight while the most important part of the facial aging, the nasolabial fold, has not been equally corrected.

With further aging, the uncorrected nasolabial fold deformity continues to increase while the masticatory zone seems to resist aging from having previously been "overtightened." The difference between the zones increases as the years elapse. This explains why a face that has previously undergone a traditional face lift tends to look unnatural with subsequent aging.

In theory, a face lift should primarily restore the support of the central zone of the face. Secondary is the removal of those tissues which have become redundant (skin and some SMAS) as a result of the repositioning process. The outcome is that all zones of the face are corrected equally. With future aging, the face continues to look natural.

HISTORY OF THE SMAS

In correction of the nasolabial fold, the relevant anatomy pertains to the SMAS in the zygomatic area. Skoog,[2] other than mentioning the tight attachments to the zygoma, did not state how far forward it was necessary to dissect over the zygoma. He advised that inferior to the zygoma, dissection should continue right up to the nasolabial fold.

The classic article of Mitz and Peyronie[7] provides contradictory information. They demonstrated that traction on the SMAS has a strong effect on stretching the perioral facial muscles. In the cadaver dissection used to illustrate this important point, the SMAS had been dissected well forward on the zygoma to be free of its attachments to the zyomaticus muscles. Yet, in advising on the surgical application, the authors recommended that the dissection extend no higher than 1 cm below the zygomatic arch nor anterior to the parotid area. In other words, the limited SMAS dissection advocated by Mitz and Peyronie does not correlate with the extended SMAS dissection they used to prove the benefit of the SMAS in the perioral area.

Jost and Levet[8] do not describe the anatomic relationship between the SMAS and the zygomaticus major. Their technique involves a limited release of the SMAS along the zygomatic arch, short of the zygomatic muscles. Ruess and Owsley[9] also do not describe attachments between the SMAS and the zygoma, but they do mention the vertical septum between the masseteric fascia and the SMAS, being strongest superiorly at the region of the junction of the arch and

body of the zygoma. These descriptions are consistent with the idea of the time that the benefit of SMAS surgery is for correction of the jawline and submental region.

Until Bosse and Papillon,[10] surgeons had been fearful of transecting the SMAS along the zygoma because of concern about damage to the underlying temporal branch of the facial nerve. Bosse and Papillon demonstrated that the nerve is relatively deeply located and that it is safe to incise and elevate the SMAS off the zygoma. This demonstration opened the way for unlimited forward dissection on the zygoma, since there are no other vital structures crossing the zygoma forward of the temporal branch.

Dissection of the SMAS along the zygoma does not of itself provide full mobilization of the SMAS. Solid fibrous attachments from the SMAS to the zygoma must first be released. Furnas[11] described the zygomatic ligaments that pass between the inferior border of the anterior zygomatic arch and the skin. Although not mentioned in his article, these attach directly to the SMAS. Following release of the zygomatic ligaments, other definite attachments may remain between the SMAS and the inferior border of the zygoma.

As described by Mitz and Peyronie,[7] the fibrous layer of the SMAS surrounds the zygomaticus major as its investing fascia (Fig. 3). To ensure a complete release of all attachments between the SMAS and the zygoma, it may be necessary to dissect completely around the zygomaticus major, including the underside and anterior border. In my observation, the fibrous sheath of the zygomaticus major alone can completely tether the SMAS. It is only when the last few remaining fibers are severed that a dramatic release is achieved. Hamra,[12] with his "deep plane rhytidectomy" technique, provided the first clear description of dissection of the SMAS off the zygomaticus muscles.

If the accessory lobe of the parotid gland is large, it may extend forward to or even under the zygomaticus major. The close adherence between the SMAS and the parotid fascia noted in the preauricular region also occurs between the SMAS and the fascia of the accessory parotid lobe. If significant tethering of the SMAS persists here following complete release from the zygoma and zygomaticus major, it also must be released to allow the SMAS to be completely mobilized.

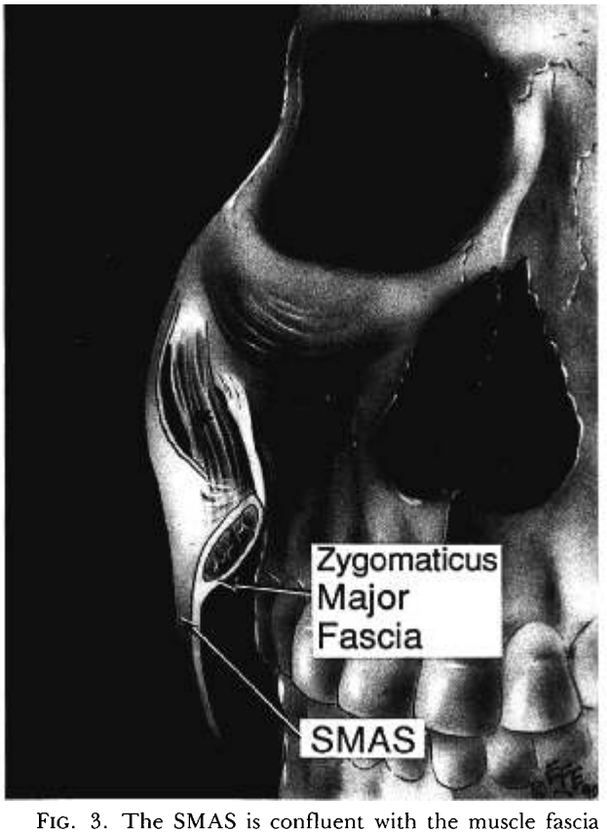

FIG. 3. The SMAS is confluent with the muscle fascia surrounding the zygomaticus major, which attaches to the zygoma (*asterisk* = muscle belly of zygomaticus major).

SURGICAL TECHNIQUE

Markings

The extent of subcutaneous dissection over the cheek is marked (Fig. 4). The surface marking of the zygomaticus major corresponds to the intersection of a vertical line dropped from the lateral

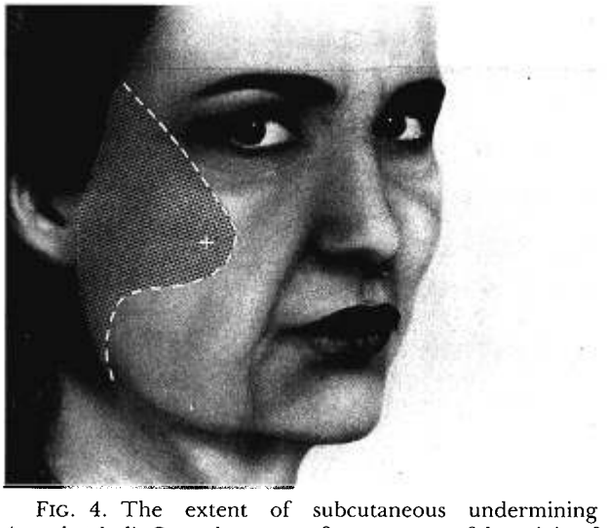

FIG. 4. The extent of subcutaneous undermining (*crosshatched*). Cross denotes surface anatomy of the origin of the zygomaticus major.

orbital rim and the lower border of the zygoma. Both landmarks are easily palpated.

Undermining

Subcutaneous undermining over the zygoma needs to extend about 1 cm medial to the zygomaticus major. Elsewhere, undermining should be minimal, being just sufficient to expose the preauricular SMAS. The orbicularis oculi is not elevated with the skin flap.

Markings on the Deep Layer (Fig. 5, *A*)

A line is marked following the lower border of the zygomatic arch and body of the zygoma. A forward projection of the line of the arch crosses the body about 1 cm above its lower border, which is about the level where the zygomaticus major attaches. There is no advantage in elevating the SMAS[12] where it is adherent to the parotid fascia posteriorly.

Transection

The SMAS is transected along the upper marking. Some of the lower orbicularis fibers may be included. The obliquely oriented fibers of the zygomaticus major are located about 5 cm forward of the tragus.

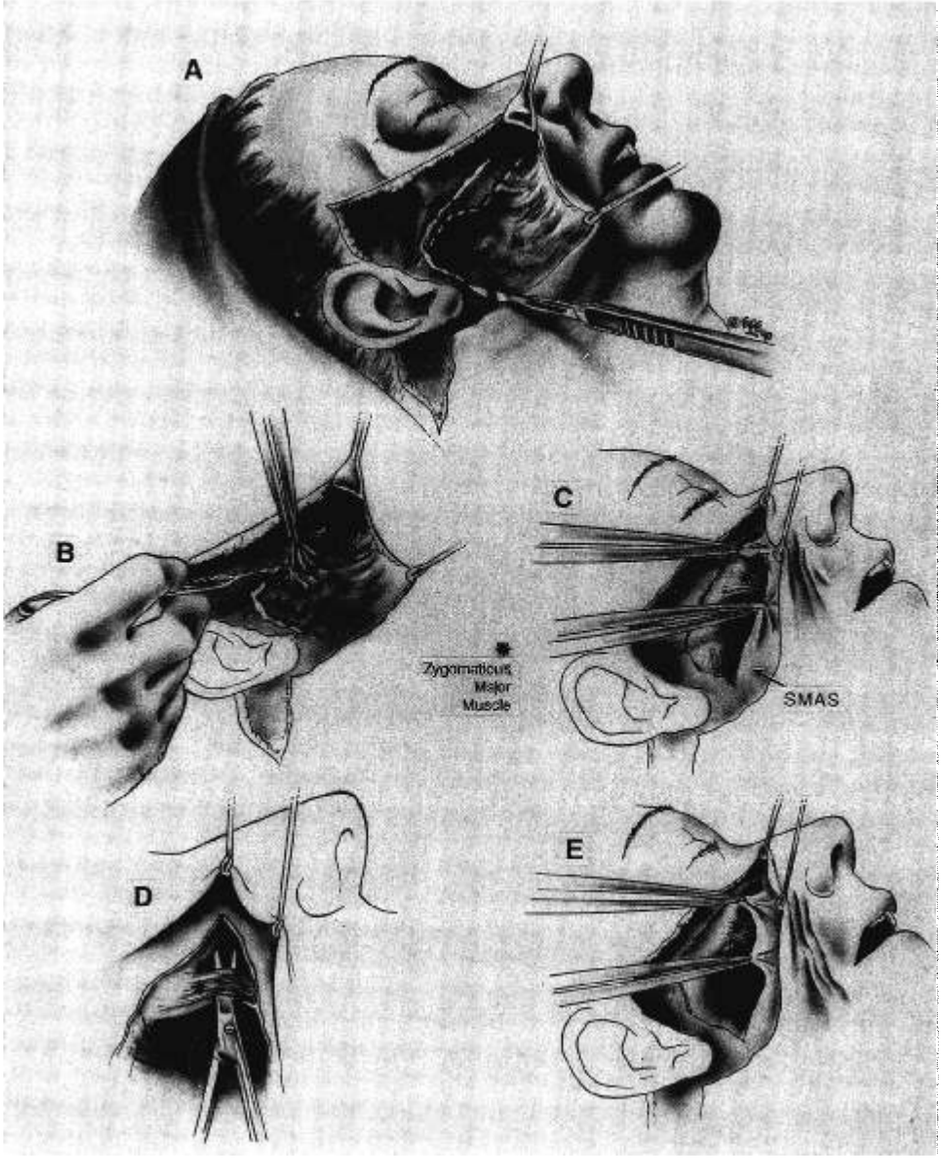

FIG. 5. Surgical dissection. (*A*) Markings on SMAS. (*B*) SMAS flap elevation. (*C, D, E*) The release test (see text).

SMAS Elevation (Fig. 5, *B*)

The SMAS is initially elevated off the parotid fascia using sharp dissection. Over the midcheek, inferior to the accessory lobe of the parotid, the SMAS is loosely adherent to the underlying masseteric fascia and buccal nerve branches.

The perforating branch of the transverse facial artery is encountered 3.5 cm in front of the tragus (Fig. 6). It had previously been transected in elevating the skin flap from the SMAS. The zygomatic branch of the facial nerve is situated just inferior to the zygoma, where the SMAS is closely adherent between the zygomatic arch and the capsule of the accessory parotid lobe. This nerve adheres to the underside of the SMAS and tends to be lifted up with the SMAS flap. The zygomatic ligaments are encountered forward of the artery. These may be stout or filamentous, but they should be precisely defined before their disruption or transection in order to protect the nerve. The nerve is immediately deep to the ligaments. The dissection may vary from easy to difficult according to the prominence of the accessory parotid lobe. If prominent, the zygomatic branch is pushed into closer relation with the SMAS.

The Release Test (Fig. 5, *C* to *E*)

When the zygomaticus major is clearly defined, the SMAS is dissected off the outer surface for about 1 cm. It should be verifed that there is no fascia tethering the deep surface of the muscle to the SMAS. The scissors should pass freely deep to the muscle. Care is required to identify and protect the branch of the zygomatic nerve running to the deep aspect of the muscle, as well as the zygomatic branch proper (Fig. 5, *D*).

The release test, performed by grasping the SMAS both medial and lateral to the muscle, assesses the mobility of the nasolabial fold. If traction on the SMAS lateral to the muscle does not provide nasolabial mobility equal to that resulting from traction on the SMAS medial to the muscle (Fig. 5, *C*), the point of tethering must be located and released. Tethering is most often due to some fascia on the underside of the muscle attaching to the zygoma. Other sites of tethering may include fibrous attachments between the SMAS and the parotid fascia, especially if the accessory lobe extends well forward, and to the upper masseteric fascia.

Resection of Redundant SMAS

With the SMAS gently advanced, an initial strip of surplus SMAS of a maximum of 1 cm is resected from the free edge. To avoid overresection, the final adjustment is deferred until after suture fixation.

Fixation of the SMAS (Fig. 7)

The first suture into area 1 (paranasal) is oriented almost transversely, parallel to the

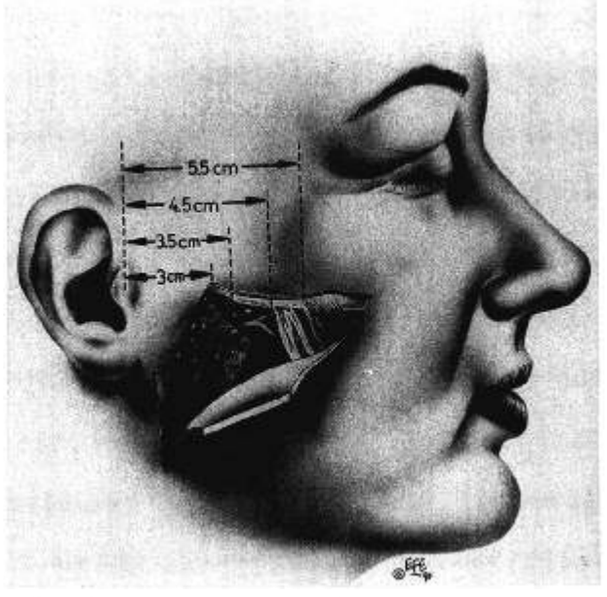

FIG. 6. Anatomy encountered along the zygoma. Distances are approximate: 3.5 cm for the branch of the transverse facial artery; 4.5 cm for the zygomatic ligaments; and 5.5 cm for the zygomaticus major muscle.

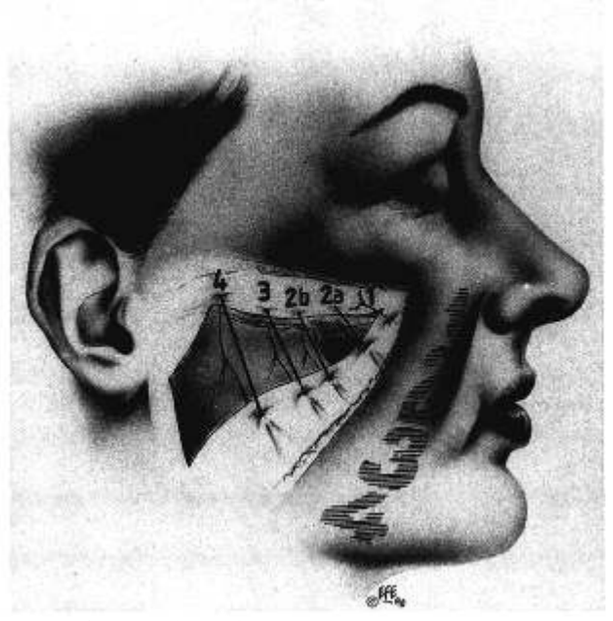

FIG. 7. Location of key sutures for SMAS fixation. Sutures 1, 2a, 2b, and 3 incorporate a deep bite to the periosteum of the zygoma.

zygomaticus minor. The second and third sutures (2a and 2b) are placed into the SMAS on either side of the zygomaticus major, in the direction of the muscle fibers. The suture bites through the upper SMAS pass deep into the periosteum of the zygoma. Monofilament nonabsorbable 3-0 suture is used. This pair of sutures can be observed to lift the nasolabial fold in area 2. The next suture (3) is fixed similarly above. Its position on the SMAS flap is tested to give the best lift for area 3. Further sutures are placed to give lift to area 4 (the jowl). Because of the possibility of damaging the temporal branch of the facial nerve in this area of the zygoma, the upper suture bite into the SMAS does not include periosteum.

The SMAS must not be overtightened because allowance must be made for opening of the mouth. It can be seen on an awake face lift patient that this results in 5 mm or more downward displacement of the cheek SMAS. Redundant upper SMAS is trimmed, and the SMAS surface is carefully smoothed of irregularities. The posterior border of the SMAS and the platysma are treated in the usual manner.

Skin Closure

The skin pull into the lower temple should direct the maximum tension across the lower border of the zygoma. This smooths what may have been thought to be bulges above the SMAS suture line.

Results and Complications

This face lift technique, utilizing an extended SMAS dissection with periosteal fixation, was performed on a series of 135 patients between May of 1988 and September of 1989. One hundred and nineteen were primary face lifts, 14 were secondary, and 2 were tertiary. Patient ages ranged from 33 to 75 years. The median age for primary face lifts was 46 years, and for secondary face lifts, 58 years.

Thirty-two patients had the face lift as a solitary procedure; 75 also had a browlift performed. Seventy-two had lower lid blepharoplasty, and 27 had an upper lid blepharoplasty. Seven patients had cheek implants inserted (some via the face lift, others via the lower lids).

The medium-term follow-up results (1 year or more) show a worthwhile improvement of the nasolabial area (Figs. 8 through 11). Although it is my strong impression that the results are better than with previous limited SMAS techniques, it is difficult to prove this photographically.

Postoperatively, several patients had a mild weakness of the zygomatic branch of the facial nerve. This was evidenced by sluggish eyelid closure on blinking and weakness of the upper lip (Fig. 12). Three patients had more than transient weakness, but all recovered completely. The most severe took 4 months. No patients suffered palsy of the temporal branch of the facial nerve.

There have been no true irregularities over the zygoma, and there have not been any palpable sutures. Two patients developed an exaggeration of preexisting "malar" bags cephalad to the SMAS suture line.

Two patients complained of a hollowing below the zygomatic arch (see Fig. 11). Initially, this was thought to have resulted from a suture dehiscence. An important point was subsequently recognized. The SMAS is not of uniform thickness, being thinnest over the accessory lobe of the parotid. This thinner SMAS, when elevated 1 to 2 cm to replace the thicker SMAS, which had been excised as redundant, may leave a hollow beneath the zygomatic arch. This situation can be avoided by folding the redundant SMAS on itself for bulk.

To assess whether the suture fixation of the SMAS to the periosteum persists, three patients had a pair of silver clips applied to the SMAS suture line, one on each side. Radiologic follow-up to 10 months after surgery showed a minimum separation of the clips, indicating a persistence of the periosteal support to the SMAS.

The early postoperative course of patients with this technique differs from that experienced by patients undergoing the more limited SMAS procedures. During the first week, not a few have difficulty opening the jaw more than part way, and temporary malocclusion has been seen. Many patients are concerned about fullness of the cheeks. They can be reassured that this is due to postoperative swelling superadded to the restored youthful cheek contour. No patient has complained of persistent cheek fullness.

Discussion

Experience with this technique in 135 face lifts has confirmed that the nasolabial fold becomes remarkably mobile following total release of the SMAS attachments to the zygoma. The so-called SMAS procedures that do not completely release the attachments of the SMAS from the zygoma to forward of the zygomaticus major are inherently doomed to failure in correction of the nasolabial fold. No amount of tension applied to the SMAS

FIG. 8. A 61-year-old woman before (*above, left,* and *below, left*) and 18 months after (*above, right,* and *below, right*) face lift using the described technique with concomitant brow lift, lower lid blepharoplasty, and light dermabrasion of upper lip. Note improvement of overall cheek contour and the pouch (area 3) of the nasolabial fold.

flap can compensate for the lack of release. Having achieved a total SMAS release, the surgeon must be careful not to overtighten the SMAS.

The major disadvantages of this technique are the additional operating time required and the risk of damage to the zygomatic branch of the facial nerve. For these reasons, it is suggested that the technique be performed by plastic surgeons with significant experience with face lifts. The zygomatic branch must be carefully protected in dissecting the adherent part of the SMAS off the parotid fascia and zygomaticus major.

In elevating the SMAS over the zygoma, the first point of adherence is the perforating branch of the transverse facial artery, located about 3.5 cm anterior to the tragus. It is in the 2-cm area between this vessel and the posterior border of the zygomaticus major muscle that a meticulous dissection is required. It is safest to "sweep" the main zygomatic nerve branch off the underside of the SMAS flap (advised by Dr. Papillon). The nerve to the zygomaticus major, a branch of the main zygomatic nerve, is separate in this area and also must be protected. As the SMAS is lifted under tension, the perpendicular orientation of the zygomatic ligaments helps identify them from the nerve, which is parallel to the zygoma (see Fig. 6). In most cases, nerve identification and protection are simple and straightforward.

The release test confirms complete mobility of the SMAS. As well as severing the zygomatic ligaments, the attachments of the SMAS to the fibrous muscle fascia of the zygomaticus major must be released. This may include residual attachments of the muscle fascia around the anterior and deep aspects of the muscle on the zygoma. Further restrictions to a complete release may include attachments to the parotid fascia of an accessory lobe or to the upper masseteric fascia. Whatever restriction is present can be safely defined with blunt dissection and must be released to achieve nasolabial fold correction.

It is logical to reattach the advanced SMAS to

FIG. 9. A 42-year-old woman before (*above, left*, and *below, left*) and 18 months after (*above, right*, and *below, right*) face lift, with brow lift and lower lid blepharoplasty.

the periosteum of the zygoma, since the SMAS normally has strong zygomatic attachments. The series of sutures allows the surgeon the control necessary for selective correction of each of the nasolabial areas. Skoog[2] sutured to the masseteric fascia, not necessarily a strong layer. Jost and Levet[8] sutured the incompletely released SMAS to the periosteum, but only to the posterior zygomatic arch. Hamra,[12] after a total SMAS release, does not directly suture the SMAS affecting the upper nasolabial areas but achieves the benefit by suturing the skin flap in the temple "under great tension."

It is safe to suture into the upper SMAS and to include the suture through the periosteum of the zygoma. It is only posteriorly, where the temporal branch crosses the zygomatic arch, that there may be a potential risk. For this reason, suture 4 does not include a deep bite into the periosteum. This has the additional advantage of allowing extra mobility of the SMAS to area 4 (the jowl). Excessive tension in opening the jaw is avoided, which has the possible consequence of SMAS suture-line disruption.

It must be stressed that the internal support is to the SMAS proper and not the zygomaticus major muscle. Traction on the mobilized SMAS pulls directly on the nasolabial fold. Traction on the muscle itself is counterproductive. Because its insertion is more medial to the nasolabial crease and adjacent lip,[5,6] lateral muscle traction exaggerates the nasolabial fold by pulling the nasolabial crease beneath the fold.

Bleeding is not a problem. Apart from the perforating branch of the transverse facial artery, the deep plane is virtually avascular. There were no hematomas beneath the SMAS in this series or in the 403 patients reported by Hamra,[12] a 0 percent incidence in over 500 patients.

Plastic surgeons have not been in agreement over the pathogenesis and treatment of nasolabial folds. However, at surgery, it is readily apparent that traction on the completely released SMAS reduces the nasolabial fullness and disperses this fullness back to the midcheek. In effect, the aging changes are being reversed. This observation suggests that the fat that accumulates in the nasolabial fold with aging is displaced fat from the

FIG. 10. A 72-year-old woman with uncorrected perioral laxity following a face lift 10 years ago, before (*above, left,* and *below, left*) and 14 months following (*above, right,* and *below, right*) extended SMAS face lift with periosteal fixation and brow lift. The face looks more natural because the aging changes of the perioral zone more closely match those of the peripheral outer cheek area.

midcheek. The SMAS of the medial cheek is a fibrofatty meshwork of real thickness, in contrast to the more readily definable, but thinner and more fibrous SMAS over the parotid. It is the fat within the SMAS meshwork that becomes displaced with facial laxity. Skin-tension surgery alone, while it may camouflage aging to a certain extent by flattening the nasolabial fold, cannot achieve the same natural look of recontouring the soft tissues.

What is the place for resection of the fat, as advocated in correction of the nasolabial fold?[5,13] Restoration of the subcutaneous fat distribution of an individual does not change his or her earlier, more youthful appearance. Nasolabial fullness at a young age is due to a local excess fat deposit in the medial cheek of developmental origin, as distinct from displaced fat from aging of the SMAS. This developmental nasolabial fullness predisposes to an appearance of premature aging of the nasolabial fold. In these people, treatment requires removal of the surplus fat in addition to redistribution of SMAS fat to the midcheek. This situation is analogous to platysma surgery in the neck, where replacement of displaced deeper tissues is the surgical key. In the patient with a "heavy neck," which predisposes to premature aging of the area, additional fat removal changes the patient's future aging tendency.

Developmental nasolabial fat is predominantly located in zones 1 and 2. Fat removal must be judicious because the fat acts like the padding in the seat of a chair to stretch the fabric. Even a slight overresection of the fat diminishes the skin tension so that fine lines may appear on slight animation.

This technique, by restoring the support of the medial cheek, reverses the sequence of aging changes described. The series of folds and furrows again becomes more confluent. As the nasolabial fold is corrected, the midcheek furrow is simultaneously reduced. Whereas traditional face lifts do not provide a real benefit medial to the nasolabial fold, correction of the laxity of the

FIG. 11. A 60-year-old woman before (*above, left*, and *below, left*) and 14 months after (*above, right*, and *below, right*) face lift, brow lift, lip lift, and lower lid blepharoplasty. Note the major benefit to zones 2 and 3 of the nasolabial fold, as well as some hollowing beneath the zygoma.

FIG. 12. Weakness of the upper lip secondary to damage of the zygomatic branch of the facial nerve 2 weeks after surgery.

SMAS definitely provides some improvement to the aging changes in the perioral area.

CONCLUSION

The nasolabial fold is part of the overall aging deformity of the cheek and perioral region. The principles of total SMAS release and direct re-support of the medial SMAS are important. They provide the means for a natural-appearing, youthful recontouring of the aging face by reversing the progressive laxity of SMAS support.

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