Subperiosteal and Full-Thickness Skin Rhytidectomy

Michael J. Yaremchuk, M.D.

Boston, Mass.

Subperiosteal lateral brow and midface elevation, upper lid blepharoplasty, transconjunctival retroseptal fat removal, lower lid skin excision, and full-thickness skin rhytidectomy are combined in one operation to rejuvenate the entire face. This combination of procedures is designed to restore both anthropometric and subjective attributes of youth. The attributes of a youthful face may be summarized as brows with an apex lateral slant, eyes that are narrow, lower lids that are short, cheeks that are full, and necks that are well defined. In addition to restoring a youthful appearance, the techniques described avoid some common iatrogenic sequelae of facial rejuvenative surgery. In a clinical experience with 28 patients over 3 years, this combination of procedures has proved to be safe and predictable. (Plast. Reconstr. Surg. 107: 1045, 2001.)

Face lift surgery is rejuvenative cosmetic surgery and, therefore, by definition [L. juvenis, young person], its goal is to restore a youthful appearance. Successful face lift surgery requires that the plastic surgeon recognize the attributes of the youthful face and that he develop effective techniques to restore them. Iatrogenic sequelae should not detract from this goal. This study presents an approach for simultaneous rejuvenation of all three of the horizontal zones of the face—the upper, middle, and lower face. This requires four basic maneuvers, including a subperiosteal brow and midface lift using coronal and intraoral approaches; upper lid blepharoplasty; transconjunctival retroseptal lower lid fat excision and skin-only blepharoplasty; and a lower face lift whereby full-thickness skin and subcutaneous flaps are elevated, tailored, and repositioned. The aesthetic goals, the operative techniques, and their rationale are presented.

AESTHETIC GOALS

The goal of face lift surgery is to restore youthful contours to the face. Certain anthropometric studies and recent computerized tomography-based studies have quantified the characteristics and relations of many facial features in young adults. This objective data, together with longstanding subjective tenets of the cosmetic industry, can help guide the surgeon in rejuvenating the face. Ideally, this surgery should be free of any face lift sequelae. Iatrogenic stigmata associated with rejuvenative cosmetic surgery include: the lateral sweep, the elevated and widened medial brow, the distorted palpebral fissure, and the over-operated neck. The major aesthetic goals for each horizontal third of the face are described.

Upper Third

Restoring the position and shape of the brow (Fig. 1) is the major goal in the rejuvenation of the upper third of the face. In the young, attractive woman, the brow should rest just at the supraorbital rim. The highest point of the brow should lie at the junction of the middle and lateral third of the brow or at approximately the lateral border of the iris. The medial extent ends on a vertical line drawn through the medial canthus and the lateral aspect of the alar base. The arch of the brow should flow into the curve of the nasal sidewall. This shape has been described as an apex lateral slant. When measured from mid-pupil to lower edge of the brow, the average height of the brow in young female adult is 23 ± 3 mm. Ideal brow height determined by the
subjective analyses of other workers\textsuperscript{12–14} is similar to the anthropometric measurement.\textsuperscript{2}

In addition to restoring the shape and position of the brow, its elevation improves upper lid contour by removing some upper lid skin redundancy. Brow elevation also lessens the severity of transverse forehead wrinkles.\textsuperscript{15}

Middle Third

Repositioning the cheek is the major goal of middle-third rejuvenation. The loss of cheek prominence that occurs with aging has been documented. Using three-dimensional, reformatted, computerized tomographic scans, Pessa et al.\textsuperscript{3} compared the projection of the cheek prominence relative to the anterior surface of the cornea in young and old patients (Fig. 2). In the youthful face, the cheek mass was positioned an average of 1.5 mm anterior to the cornea. This relationship was termed a positive vector. In older individuals, the cheek mass was positioned an average of 2.5 mm posterior to the cornea. This relationship was termed a negative vector. The change in anterior cheek mass relative to the corneal surface with aging was statistically significant (\(p = 0.0038\)). This vector change resulted not only from soft-tissue descent but also from a retraction of the infraorbital rim due to the remodeling of the craniofacial skeleton that occurs with age.

In addition to restoring the cheek prominence, cheek elevation softens the nasolabial fold and repositions the cheek-lid interface, effectively shortening the height of the lower lid.\textsuperscript{16} Elevation of the cheek-lid interface not only improves the contour of the lower lid but also maintains or, in some patients, improves the shape of the palpebral fissure. In the young female adult, the lower lid is closely applied to the convexity of the globe to create a concavity before it merges with the convexity of the cheek. This area of merging, or the cheek-lid interface corresponds to the level of the infraorbital rim. The average height of the lower lid in the young female adult is 12 \pm 1.3 mm (Fig. 3).\textsuperscript{2} Descent of the cheek with aging not only lengthens the appearance of the lower lid, but also may also alter the shape of the palpebral fissure by lowering the position of the lower lid margin. In young women, the vertical height of the palpebral fissure at the level of the pupil was measured to be 10.8 \pm 1.2 mm. The length of the fissure, measured from medial to lateral canthus, is approximately 31 mm. The lateral canthus is located an average of 4 degrees \pm 2 degrees higher than the plane
created by the medial canthi (Fig. 4).2 This results in an upward tilt of the fissure and its rapid tapering from midpupil laterally. Lower lid and midface surgery should maintain or improve, that is, narrow the shape of the palpebral fissure.

Lower Third

The goal of rejuvenation of the lower one-third of the face is to restore mandibular and cervical-mental contour. Ellenbogen and Karlin17 have proposed visual criteria for restoring a youthful neck. These include a distinct inferior mandibular border, subhyoid depression, a visible thyroid cartilage bulge, a visible anterior border of the sternocleidomastoid muscle, and a cervicomental angle between 105 degrees and 120 degrees. These authors pointed out that, because the sternocleidomastoid muscle is always almost vertical, a sternocleidomastoid submental line would be 90 degrees and easy to assess. An adaptation of these criteria is presented in Figure 5. Restoration of these contours requires correction of the jowls, removal of excess submental fat, and correction of platysmal bands. Skeletal anatomy, including the shape and position of the mandible and hyoid may limit the surgeon’s ability to reach these aesthetic goals with face lift surgery alone.

Summary

The wide range of facial morphology, the degenerative changes that occur with time to connective tissues, and the limitations of sur-

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**Fig. 3.** The mean height of the lower lid corresponding to the distance from the lower lid ($P^i$) margin to the orbital rim ($or$) was $12 \pm 1.3$ mm when measured in 40 women, ages 19 to 25 (after Farkas et al.).

**Fig. 4.** Dimensions of the palpebral fissure measured in Caucasian women, ages 19 to 25. The mean height of the eye fissure measured from the upper lid ($P^s$) to lower lid ($P^i$) margin at the midpupil was $10.8 \pm 1.2$ mm ($n = 200$). The mean length of the eye fissure measured from medial to lateral canthus was $30.7 \pm 1.2$ mm ($n = 200$). The mean inclination of the eye fissure was $4.1$ degrees $\pm 2.2$ degrees ($n = 50$) (after Farkas et al.).

**Fig. 5.** Visual criteria for a youthful neck include (1) distinct inferior mandibular border, (2) subhyoid depression, (3) visible thyroid cartilage bulge, and (4) submental line/sternocleidomastoid border angle of 90 degrees (after Ellenbogen and Karlin).
Surgical Technique

The order of procedures is (1) upper lid blepharoplasty, (2) subperiosteal brow and midface lift, (3) lower face lift, and (4) lower lid blepharoplasty.

Upper Lid Blepharoplasty

Because the lateral brow lift removes considerable lateral upper lid skin redundancy, lid skin excision is conservative. Less upper lid skin is removed than when an upper lid blepharoplasty is done as an isolated procedure. A medial fat pocket bulge is usually the primary target during upper lid fat removal. Care is taken to avoid overresection of fat.

Brow and Midface Lift

The brow and midface lift are performed using bicornal and intraoral incisions (Fig. 6) to allow separation of the soft tissues from the facial skeleton, similar to the techniques advocated for the skeletal exposure necessary for complex midface and orbit repair.18 Through the bicornal incision, the scalp is elevated away from the skull in first a subgaleal and then, at approximately 2 cm above the supraorbital rim, a subperiosteal plane (Fig. 7). In the temporal area, the superficial layer of the deep temporal fascia is incised at the level of the zygomaticofrontal suture to expose the superficial temporal fat pad.19 Dissection is carried along the surface of the superficial temporal fat pad until the zygomatic arch is reached. Its periosteum is incised and elevated. From the intraoral approach, subperiosteal dissection extends laterally from beneath the infraorbital nerve foramen over the lateral maxilla and the masseter muscle to connect with the dissection from above. Notably, the lateral canthus and arcus marginalis remain attached to the zygoma. After the subperiosteal dissection, the cheek soft-tissue mass should be mobile. Preoperatively, a point is marked approximately 3 cm beneath the lateral canthus. This point is transferred to the subperiosteal surface of the cheek flap by passing a straight needle through the full thickness of the flap. Through the intraoral incision, the needle tip is visualized and the point of penetration is purchased with a figure-of-eight 2-0 polyglycolic acid suture. Through the coronal access, the stitch is used to elevate the cheek tissues vertically. This elevation is stabilized by suturing to the deep temporal fascia at the level of the zygomaticofrontal suture (Fig. 8). A second elevation/fixation stitch is placed usually 1 cm more medially, both for security and individualized impact on more medial cheek elevation. A suction catheter is placed over the maxilla, zygoma, and temporal area and exits through a stab wound incision in the temporal scalp. It is removed the morning after surgery.
Lower Rhytidectomy

The coronal incision is continued preauricular, then retrotragally, around the lobule, above the postauricular sulcus and just above the level of the lateral canthus and tragus back into the scalp (Fig. 6). A submental incision is also made. Through this access, a full-thickness skin subcutaneous flap is elevated on the superficial musculoaponeurotic system (SMAS)-platysma anatomic continuum20 (Figs. 9, 10). The extent of medial dissection increases as one proceeds from the temporal area into the neck. In the temporal area, a biplanar flap is created—subperiosteal and subcutaneous. This area of dissection overlap is approximately 2 to 3 cm and extends inferomedially toward Stenson’s duct (Fig. 7).

The subcutaneous dissection allows identification of the lateral aspect of the orbicularis oris muscle, divides the mandibular retaining ligaments,21 and is carried across the midline in the neck. Inferiorly, dissection is carried just beneath the hyoid.

This plane of dissection is most easily identified by identifying the posterior edge of the platysma muscle where it abuts onto the sternocleidomastoid muscle. One can follow this muscle medially and superiorly. All dissection is done with scissors under direct visualization. With little exception, each vessel that penetrates the platysma can be identified, allowing its coagulation with bipolar cautery before it is divided.

Submental and submandibular contouring. After the flaps are elevated, a submental lipectomy is performed by removing fat with scissors directly from the undersurface of the full-thickness skin-subcutaneous flap (Fig. 9). This is routinely done in the submental and jowl area. It is unusual for the surgeon to remove any subplatysmal fat.

Management of the platysma is determined
by its anatomy. Most often, mandibular contour is accentuated by creating a modified platysma L-flap. At the level of the hyoid, a 2- to 2.5-cm wedge of platysma is excised. Laterally, the platysma is separated from the border of the sternocleidomastoid muscle for approximately 1 to 2 cm, then resuspended laterally where it is sutured to the sternocleidomastoid fascia just lateral to the postauricular nerve. Above the mandible, the continuation of platysma, now the SMAS, may become redundant because of the platysma suspension. For that reason, the SMAS may be imbricated or excised, depending on its redundancy, to improve the contour of the face in this area. Ptotic submandibular glands are managed using Feldman’s corset technique directly over the gland.

Redraping of flaps. The coronal and face lift flaps are redraped and tailored. In general, maximum tension is placed superolaterally on the lateral brow, allowing 2 to 3 cm of scalp to be excised. Approximately 1 cm of scalp is excised in the midline. Skin flaps are redraped with vertical elevation in the temporal area and superolateral tension behind the ear. A total of 2 to 4 cm of skin is routinely removed from behind the ear. Suction drains are placed in the neck.

Lower Lid Blepharoplasty

The desired lower lid contour is achieved by a combination of fat excision, if necessary, skin redistribution, and tailoring. When fat protrusion is prominent, the transconjunctival retroseptal approach is used to excise the fat that protrudes beyond the infraorbital rim. Redundant eyelid skin is managed by first making an incision approximately 1 mm beneath the lash line. The skin is then separated from the underlying orbicularis oculi muscle for approximately 10 to 12 mm and redraped. It may be necessary to trim the surface of the muscle or imbricate it with absorbable sutures to optimize the contour. A total of 1 to 3 mm of skin is excised.

A mildly compressive dressing is placed on the lower face and neck. No compression is used on the scalp and periorbital area.

Clinical Experience

This combination of procedures has been performed during a single operation on 28 patients over a 3-year period. All but one patient was female. The average age was 53 years (range, 43 to 65 years). Complications included one hematoma requiring drainage, one transient (3 weeks) frontal branch palsy, and one lower lid malposition requiring revisional surgery. The patient requiring lid revision had had blepharoplasty and cheek implant placement complicated by infection 10 years earlier. Any alopecia along the coronal scar has been sporadic and self-limited. The anticipated sensory deficits behind the coronal scar improved with time and were not bothersome to the patient. Representative patient examples are presented in Figures 11 through 14.

The combination of procedures presented in this study has two major components—a subperiosteal brow and midface lift and a full-thickness skin lower face lift. These major component operations can and have more often been done independently. Over the 3-year period reported here, 40 patients (average age, 54) have undergone full-thickness skin rhytidectomy and 20 patients (average age, 43) have undergone brow and midface surgery alone.

Discussion

The attributes of the youthful face can be summarized as brows with an apex lateral slant, lower lids that are short, eyes that are narrow, cheeks that are full, and necks that are well defined. The combination of two major procedures, i.e., the subperiosteal brow and midface lift and a full-thickness skin and subcutaneous lower face lift, allows the surgeon to restore these youthful attributes with minimal iatrogenic sequelae. Iatrogenic sequelae include not only morbidity due to complications, such
as facial nerve damage, but also the creation of “looks” that exist only after cosmetic surgery, e.g., the lateral sweep, the elevated and widened medial brow, the distorted palpebral fissure, and the overoperated neck.

Several conceptual and technical aspects of this approach to total facial rejuvenation are at variance from current conventional techniques. These include the open coronal approach to the brow, the minimal manipulation of forehead musculature, the limited periorbital dissection and manipulation during the

Fig. 10. Intraoperative views of lower face lift dissection diagrammatically represented in Figure 9. All lower face lift dissection is performed on the SMAS-platysma anatomic continuum. (Above) Early in the dissection, the SMAS-platysma anatomic continuum is identified by locating the lateral edge of the platysma and dissecting onto its surface medially in the neck and then superiorly in the face where it meets with the SMAS and the facial musculature. (Below) Complete lower face dissection. The SMAS, platysma, and the lateral aspects of the orbicularis oculi and orbicularis oris are exposed. In the lower left, a drain placed during the brow and midface dissection lies on, and then beneath, the superficial layer of the deep temporal fascia.
midface lift, and lower face dissection directly on the SMAS and platysma with resultant full-thickness skin subcutaneous flaps. Their rationale is discussed below.

There are recent reports in the literature that directly and indirectly support the aesthetic benefit of the brow shape and position advocated here and the failure of conventional open and, particularly, closed endoscopic techniques in achieving this look.\(^6,25,26\) Freund and Nolan\(^6\) had nine cosmetic surgeons and 11 cosmetologists evaluate eyebrow position and shape using computer-graphic manipulation of photographs. They also had these observers compare 100 preoperative and postoperative brow lift photographs taken from 16 frequently referenced articles. They concluded that the medial brow should be at or below the supraorbital rim but not above it, that eyebrow shape should have an apex lateral slant, and that standard open brow lifts frequently result in unsatisfactory eyebrow height and shape as judged by these criteria.

Swift et al.\(^25\) evaluated brow position 1 year after endoscopic brow lift in 20 patients. They found that endoscopic brow lift indeed pro-
duces a long-term elevation of the brow. However, the elevation medially was consistently greater than that at the level of the lateral limbus and lateral canthus. These authors point out that this type of elevation tended to flatten the brow, which may not be the most aesthetically desirable eyebrow shape and position.

Troilius compared long-term brow position after both endoscopic subperiosteal and open coronal subgaleal lifts. He, too, found that the medial brow was raised higher than the lateral
brow with the endoscopic lifts and that the average distance between midpupil and brow was 28.9 mm (the normal average distance in a young female adult is 23 mm) (Fig. 1). Troi-lius did not address the aesthetic consequences of these procedures other than to comment in the legend of patients who had open procedures. He said that they looked better postoperatively because their lateral brow was elevated from the preoperative position.

The aesthetic goal of brow-lift surgery should be restoration of youthful brow shape and position, not elevation per se. As shown in the patient in Figure 11, brow position in youth (Fig. 11, above) is often lower than the posture maintained in later years (Fig. 11, below). Ideal brow positioning, in most cases, requires minimal elevation of the medial brow and significant elevation laterally (Fig. 1). To achieve this, an open coronal approach is used and the corrugator muscles are not excised. The coronal incision allows differential scalp excision and more selective control of brow contour. Brow repositioning alone or in combination with upper blepharoplasty significantly improves transverse forehead wrinkles, because patients no longer chronically strain to clear their field of vision. The coronal incision and lateral brow lift also allow a more vertical elevation of the lower face, both avoiding the lateral sweep and managing the lateral orbital skin excess inherent in vertical midface lifts. The corrugator muscles are not excised, because their removal results in elevation and separation of the brow. Therefore, the brow lift procedure, as described in this study, accepts persistence of dynamic forehead wrinkles in exchange for optimal brow position and contour. As an alternative to corrugator manipulation, significant glabellar frown lines may be treated operatively with dermal fat grafts and postoperatively with botulinum toxin.

The widespread training of craniofacial techniques and, more recently, the use of endoscopic equipment, which allows surgical access through more limited incisions, has resulted in several articles describing cheek elevation as a component in rejuvenation of the lower lid. These methods have evolved from modifications of Tessier’s procedure using bicoronal, introral, and periorbital incisions to those using small scalp incisions for endoscopic access, to ones using periorbital incisions alone. By restoring the cheek-lid interface, these procedures have moved toward

![Fig. 13. A 48-year-old woman underwent subperiosteal brow and midface lift, upper lid blepharoplasty, lower lid skin excision, full-thickness skin and subcutaneous lower face rhytidecctomy. No fat was removed from the lower eyelids. (Above, left) Preoperative frontal view. (Above, right) Ten-month postoperative frontal view. (Center, left) Preoperative oblique view. (Center, right) Ten-month postoperative oblique view. (Below, left) Preoperative lateral view. (Below, right) Ten-month postoperative lateral view.](image-url)
restoring a more youthful lid. However, they are often associated with a significant incidence of palpebral fissure distortion that are little documented in the literature but mentioned in open fora, noted in clinical practice, and perhaps suggested by the multiple generations of these procedures. The palpebral fissure tends to vertically elongate with age and may be further compromised by conventional skin muscle flap blepharoplasty. Procedures that disassemble and reassemble the lid and lateral canthus, often part of midface lifting procedures, may result in unnatural shapes and positions of the fissure (Fig. 15). Only recently have Hester et al. reported a complication/revision rate of 19 percent related to canthal deformity and lower lid malposition when reviewing their 5-year experience of transblepharoplasty lower lid and midface rejuvenation. This procedure involved skin muscle flap exposure, extensive subperiosteal midface and lower lid mobilization, and lateral canthotomy and cantholysis. Hobar and Flood’s recent description of a simplified midface lift, similar to the one described here, emphasizes that there is no risk of palpebral fissure distortion with their procedure because no eyelid incision is used. Lid and canthal malpositions are not unexpected when aesthetic procedures mimic the complexity of major reconstructive ones.

The concepts and surgical techniques for orbital rejuvenation presented in this study

FIG. 14. A 55-year-old woman who underwent subperiosteal brow and midface lift, lower lid skin excision, and full-thickness skin and subcutaneous tissue rhytidectomy. No fat was removed from the lower lids. She had upper and lower lid blepharoplasty 3 years earlier. (Above, left) Preoperative frontal view. (Above, right) Twelve-month postoperative frontal view. Note improvement in palpebral fissure shape after midface elevation. (Center, left) Preoperative oblique view. (Center, right) Twelve-month postoperative oblique view. (Below, left) Preoperative lateral view. (Below, right) Postoperative lateral view.

FIG. 15. Diagrammatic representation of palpebral fissure in youth, with aging, after blepharoplasty, and after canthoplasty. The characteristic dimensions of the youthful palpebral fissure have been defined in Figure 4. With aging, soft-tissue laxity may result in soft-tissue descent and increase in the vertical height of the palpebral fissure. Standard blepharoplasty may further distort the palpebral fissure by partially increasing vertical height (laterally). Canthoplasty techniques often result in a vertical elevation of the canthus and a narrowing laterally of the palpebral fissure.
evolved from the author’s training in and experience with orbital reconstruction using craniofacial techniques. Craniofacial approaches for orbital reconstruction use remote incisions to allow complete separation of the soft tissues from the underlying skeleton in the subperiosteal plane. Previous objective evaluation of these soft-tissue approaches for orbital reconstruction revealed the following points germaine to the rejuvenation of the cheek and lower lid. Use of the blepharoplasty skin muscle flap to expose the lower lid often distorts the shape of the palpebral fissure by increasing its vertical height. It was found that it was difficult to restore the precise position of the lateral canthus and the shape of the lateral commissure after the canthus was detached and repositioned. The cheek soft tissues were found to sag if they were stripped from the anterior face of the maxilla and not resuspended. This sag results in a loss of cheek prominence, accentuation of the nasolabial fold, and possible vertical elongation of the palpebral fissure—findings not dissimilar from those resulting from the aging process. Resuspension of the cheek soft tissues reversed these distortions. This analysis revealed the importance of palpebral fissure shape in the presentation of the upper face. It also emphasized that the predictability of soft-tissue healing and external landmark appearance was related to the extent of soft-tissue manipulation. A clinical approach was, therefore, adapted whereby the risks of extensive soft-tissue degloving were confined to the more devastating posttraumatic orbital deformities. This experience influenced concepts for orbital rejuvenation, which emphasizes the sensitivity of the shape of the palpebral fissure to periorbital soft-tissue manipulation. It is noteworthy that Hester et al. have modified their transblepharoplasty approach to rejuvenate the orbit and midface to lower the 19 percent incidence of lower lid and canthal malposition. They advocate less dissection of the lower lid and cheek and avoidance of cantholysis and canthoplasty.

The limited periorbital dissection used in the procedure presented here preserves or improves palpebral fissure shape by several potential mechanisms, including preservation of orbicularis oculi innervation, minimization of scarring, division of the lower lid retractors, recruitment of lower lid skin, and avoidance of lateral canthal reconstruction and repositioning. The innervation to the orbicularis oculi muscle to the lower lid—particularly the pre-tarsal portion, which is believed responsible for maintaining lower lid tone—is not violated. In a cadaver study, Ramirez and Santamarina recently have shown that innervation to the orbicularis oculi comes from the zygomatic branches of the facial nerve, which enter the muscle’s underside vertically from below. Skin muscle flap blepharoplasty, skin muscle flap approaches to the midface, and muscle strip procedures tend to denervate this muscle, thereby predisposing to deterioration of lid tone and position. Preservation of the orbital septum eliminates the possibility of shortening of this lamella with scarring. Less surgical disruption of the lower lid lamellae and their attachment to the skeleton results in less potential for distortion from wound contraction. Division of the lower lid retractors during the retroseptal transconjunctival approach for fat removal may allow the lower lid to assume a more elevated position. Maintenance or improvement of lower lid position also results from the cheek elevation intrinsic to this procedure, which recruits vertical height from the outer lid lamellae. Note that palpebral fissure shape is maintained in the young patient in Figure 11 and improved (made narrower) in the patients presented in Figures 12 through 14. Finally, because there is no manipulation of the lateral canthus, palpebral fissure distortions caused by lateral canthus repositioning with canthopexy or canthoplasty are avoided.

Although protective of the shape of the palpebral fissure, this procedure’s less aggressive separation and rearrangement of lid and cheek tissues provides for a relatively less dramatic effect on the cheek-lid interface and on the tear trough deformity. Similarly, improvements in lower lid contour deformities caused by orbicularis oculi muscle redundancy or hypertrophy may be less marked when accomplished by muscle surface imbrication or trimming than by those techniques using muscle excision.

The skin-only face lift described here is different from conventional skin-only lifts because all the subcutaneous fat in this procedure is elevated with the flap away from the SMAS and platysma. This plane of dissection, which was advocated by Su and Yaremchuk in 1984 and recently by Hoeftlin in 1998, has several advantages. Whereas most skin lifts are performed blindly, bluntly, and in a poorly defined anatomic plane, this procedure is done under direct visualization on the well-
defined platysma-SMAS-anatomic continuum. All branches of the seventh nerve are located beneath this layer and are, therefore, protected. With the aid of loupe magnification, each vertical perforator leaving the platysma and SMAS can be visualized and coagulated with bipolar electrocautery before being divided. This method is somewhat tedious and time consuming but results in less postoperative bruising. Although the platysma and orbicularis oris may be thin and attenuated in older patients, an extensive medial undermining can be done, allowing safe division of the mandibular retaining ligaments. In addition, having all of the jowl and submandibular fat on the flap allows precise contouring with scissors to optimize mandibular neck contour. Theoretically, this thicker flap allows more extensive undermining and tension at closure.

**SUMMARY**

The combining of a subperiosteal brow and midface lift, skin-only lower lid excision, transconjunctival retroseptal fat removal, upper lid blepharoplasty, and full-thickness skin and subcutaneous lower face lift is designed to fulfill the objective criteria of a youthful appearance while minimizing iatrogenic sequelae. This young and “unoperated” look may be summarized as one with brows that have an apex lateral slant, eyes that are narrow, lower lids that are short, cheeks that are full, and a neck that is well defined. The brow and midface lift performed through a bicoronal incision allow selective elevation of the lateral brow and a more vertical elevation of the lower face. The midface lift softens the nasolabial fold and restores the cheek prominence and cheek-lid interface. When coupled with a skin-only blepharoplasty and transconjunctival fat removal, lower lid contour is improved without distortion of the palpebral fissure. The full-thickness skin subcutaneous lower face lift allows dissection along the well-defined SMAS platysma anatomic continuum. This plane of dissection is safe to the seventh nerve, allows more precise hemostasis of the vertical perforators, provides a flap with a richer vascularity, and allows precise submandibular fat contouring. This surgery requires that the plastic surgeon be familiar with the periorbital soft tissue, the facial skeletal structure, and the SMAS-platysma anatomy.

**Michael J. Yaremchuk, M.D.**

Division of Plastic Surgery
Massachusetts General Hospital, WACC-453
Boston, Mass. 02114
m.yaremchuk@partners.org

**REFERENCES**

17. Ellenbogen, R., and Karlin, J. V. Visual criteria for suc-


