

Mask Lift and Facial Aesthetic Sculpturing

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Paul Tessier started the great adventure of sculpturing the malformed face more than 30 years ago. Key procedures such as subperiosteal dissection and lifting of the facial mask, bone grafting from a cranial site of harvest, and lateral canthopexies have been utilized and have withstood the trial of time in thousands of patients.

The mask lift with facial aesthetic sculpturing, a newcomer in aesthetic surgery, is an extrapolation of these craniofacial procedures. It is a different and revolutionary approach to the aging face that seeks to normalize, rejuvenate, and embellish the face through a subperiosteal lift of the facial mask and transformation of the underlying structures.

Facial aesthetic sculpturing refers to the aesthetic sculpturing of the facial skeleton. It allows us to equilibrate the components of a malformed face and normalize it by osteotomies, displacements in three dimensions, and bone overgrafting; to normalize the forms of an unattractive face and to embellish it by harmonization of the skeletal volume; and to restore the forms of an aging face and to rejuvenate it by augmenting resorbed bone, reducing hypertrophic bone, and lifting the facial mask.

My experience includes 350 patients operated on from 1981 to 1992, of these, 200 cases were purely aesthetic, 150 functional. The complications encountered have been few. The technique described offers an appropriate response to the different problems of aging and embellishment of a face, whether for reequilibration of osseous volumes or for sagging of soft tissues of the superior two-thirds of the face. Facial aesthetic sculpturing finds application also in some malformations and acquired deformities and in young faces with unsightly features. (*Plast. Reconstr. Surg.* 95: 21, 1995.)

*Un défaut de l'âme ne
Peut se cacher sur un visage,
Mais un défaut du visage,
Si on le corrige,
Peut corriger une âme.*

J. Cocteau

A flaw of a spirit
Cannot be hidden on a face
But a flaw of a face
If rectified can rectify a spirit.

The great adventure of sculpturing the malformed or deformed face was started by Paul Tessier more than 30 years ago. During 12 years (1972–1984) spent in his unit at the Hospital Foch in Paris, I had the opportunity to see his superb results in craniofacial surgery. Key procedures such as subperiosteal dissection and lifting of the facial mask, bone grafting from a cranial site of harvest, and lateral canthopexies have been utilized and have withstood the test of time in thousands of patients.

The mask lift with facial aesthetic sculpturing, a newcomer in aesthetic surgery, is a further development of these procedures. It seeks to normalize, rejuvenate, and embellish the face through a subperiosteal lift of the facial mask and transformation of the underlying structures by facial aesthetic sculpturing.

DEFINITIONS

As Tessier² writes, "The facial mask is constituted by all those layers which cover the skeletal structures: the skin and its hypodermis, the SMAS, the deeper tissues—dense fatty deposits and muscle—and the periosteum itself. This last is the intermediate layer between the skeletal component responsible for the structure of the face and the overlying tissues which complete the forms and are above all the mobile part of the face."

Facial aesthetic sculpturing refers to the transformation of the shape of the facial skeleton. It allows us to *equilibrate* the components of a malformed face and to normalize it by osteotomies, displacements in three dimensions, and bone overgrafting, as in Crouzon and Apert syndromes, hypertelorism, Graves' disease, blepharophimosis, Treacher Collins syndrome, and other congenital and acquired deformities; to

normalize the forms of an unattractive face and to embellish it by harmonization of the skeletal volumes in faces that are long, flat, sad, and heavy; and to *restore* the forms of an aging face and to rejuvenate it by augmenting resorbed bone, reducing hypertrophic bone, and lifting the facial mask. I personally reserve the term *mask lift* to the simple bicoronal approach with complete subperiosteal dissection of the above-mentioned skeletal structures, and I use the term *facial aesthetic sculpturing* when modifications of the bony framework are added.⁴

INDICATIONS

The aging process of the face affects all the tissues: obviously, the skin, for which the process has been widely investigated and is characterized by variations in thickness, wrinkling, and loss of elasticity; the adipose tissue and muscle, which tend toward atrophy and laxity; the conjunctival tissue and especially the tarso-ligamentous structures, which become hypotonic; and finally, bone, which tends toward zonal resorption and/or hypertrophy. The result is facial wrinkling or parching of the skin, laxity and loss of tone of the aponeurotic muscle masses, and variations in bone volume. The pluritissular interplay of this loss of both tone and trophism results on the one hand in a volumetric loss in the face and/or accentuation of certain features and on the other hand in a flattening and sagging of features.

Global characteristics of aging are that the face closes up on itself in the central region (Figs. 4 through 8); the forehead enlarges and becomes "humpy" and furrowed (Figs. 2 and 4 through 7); prominent orbital margins and glabella give the face a stern expression (Figs. 4 and 7); the eyebrows droop and weigh on the eyes (Figs. 2, 5, and 8); the eyes become closer (Figs. 2 and 5) or globular (Fig. 8); the nose lengthens (Fig. 8); the malar prominences fade and descend on the cheeks (Figs. 2, 5, 7, and 8); the temporal and perinasal regions deepen (Figs. 2, 4, and 5); the upper lip becomes longer and flatter (Figs. 4, 5, and 7); the chin shrinks and drops, becoming flat and square (Figs. 4, 5, 7, and 8); and the oval of the face is lost (Figs. 2, 4, 5, 7, and 8).

The key point for the outcome of lifting the facial mask is complete dissection of the frontal bone, orbital margins, orbital cavity, and all of the zygomatic arch, malar prominences, and maxilla. As Tessier said, "This subperiosteal dissection may sometimes be a procedure in itself,

but far more often, it is the only approach to problems situated below the periosteum, that is, on the skeleton or mediated by the skeletal structures. Moreover, these subperiosteal problems are correlated to the structures, that is, to the form itself of the face. The solutions are as numerous as the individuals and the circumstances."²

The bicoronal approach as it is carried out in craniofacial surgery allows the surgeon (Figs. 10 through 13) to expose the forehead, temporal regions, root of the nose, orbital region in its totality, malar bones, and zygomatic arches; to harvest on the spot and according to need monocortical bone grafts from the parietal regions; to sculpture the facial skeleton by grinding and/or bone grafting; and to obtain a full-thickness redraping of the soft tissues of the face, once the subperiosteal dissection is completed in the maxillary region through a vestibular sulcus approach.

Lifting the facial mask thus permits an optimal correction of collapsed features and at the same time makes it possible to obtain that facial fullness which is so luminous.

TECHNIQUE

My first description of the mask lift technique was presented in October of 1986 at the National Congress of the French Society for Plastic and Reconstructive Surgery in Paris³; that presentation was based on personal experience and on 12 years of experience with Paul Tessier's technique of subperiosteal dissection of the upper two-thirds of the face. In 1989, I published my results with 130 patients operated on according to that technique for both aesthetic and functional reasons.⁴ My first clinical application of the mask lift goes back to 1981 for the correction of an ectropion in a facial palsy case and a case of Graves' disease with orbital decompression and mask lift.⁹ I observed that apart from the correction of the initial malformation, I obtained an effect of rejuvenation and embellishment due to the new distribution of facial soft tissues and the osseous modifications of the skeleton. In 1984, I overstepped the barrier between reconstructive and aesthetic surgery in the case of a 39-year-old woman who had a flat and tired face with a sad "cocker spaniel" expression. I then had the ambition not only to rejuvenate her face but also to achieve the "star look" one can find in fashion magazines.

To understand the details of the mask lift and facial aesthetic sculpturing, one needs to know



FIG. 1. (*Above*) At 26 years of age, a long face, lacking in harmony, including a small, irregular forehead with furrows, drooping lateral canthi, big nose, and flat chin. (*Below*) Seven years later, after rhinoplasty, genioplasty (jumping bone flap), and mask lift with tight lateral canthoplasty.

what a harmonious facial appearance is and how a youthful relationship between the soft tissues and the underlying skeleton can be re-established. Analysis of "stars' eyes," for example, brings up various common denominators (Fig. 9); a well-designed eyebrow arch, neither too protruding nor too flat; a high external angle—i.e., the famous tilting of the eye; a palpebral fold that is 8 mm from the ciliary margin;

an upper lid that slightly covers the superior border of the cornea; a lower lid that is straight and skims the inferior border of the cornea; and high and prominent malar bones. Why does such an eye have so much success? Is it a temporary phenomenon of fashion, or is this "doe's eye" proper to youth and beauty? The answer is not straightforward, but the facts are there, and we surgeons can learn a lesson.



FIG. 2. (*Above*) A beautiful 49-year-old woman requesting facial rejuvenation. Nice bony structure, nice skin. (*Center*) Three years after mask lift, blepharoplasty, and neck lift. (*Below*) Long-term result, 6 years after surgery.

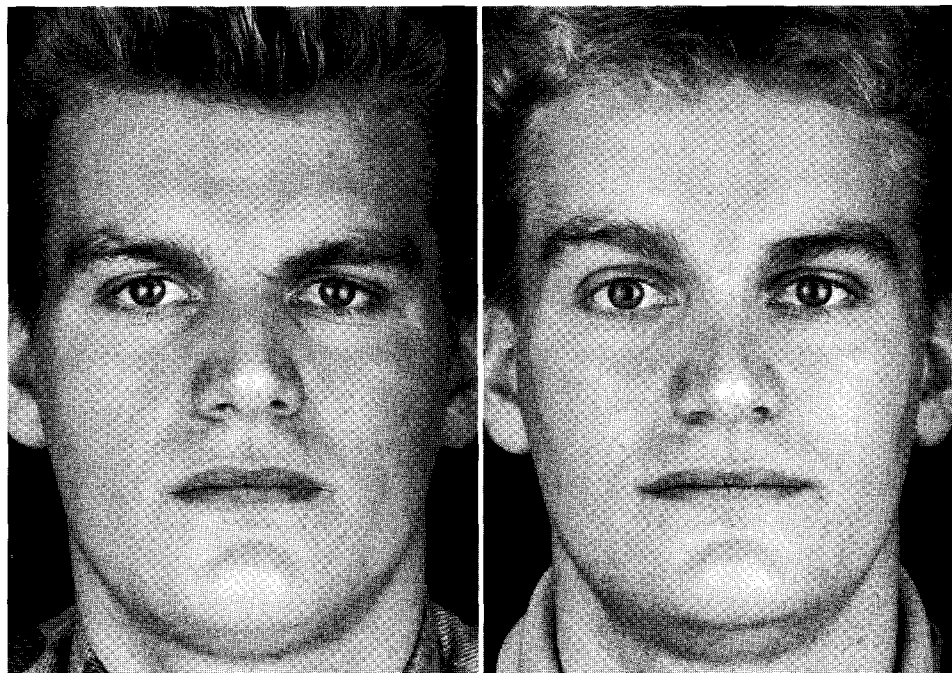


FIG. 3. (Left) A heavy face whose features seem "contracted" in the middle. Low forehead, small eyes, small nose. (Right) One year after facial aesthetic sculpturing, we see reequilibration of the face in both vertical and horizontal dimensions by enlargement of the frontal region, lateral displacement of the eyebrows and the eyes, and elongation rhinoplasty and genioplasty.

Aging eyes also have points in common. The orbital ridges are either protruding or flattened with a droop of the eyebrow arch (Figs. 4, 5, and 7), and the palpebral fissures are rounded because of the fall of the external angle, a result of the weakened lower lid and of the upper lid being long and hollow (sunken eye) (Figs. 4 and 7) or swollen with the disappearance of the upper lid fold (Fig. 5). From the combination of these circumstances arises the "cocker spaniel eye" (Fig. 4), for which the mask lift procedure can achieve what the Flowers "anchor blepharoplasty technique" can sometimes achieve in Orientals, but what the classic blepharoplasty cannot.¹² In fact, classic blepharoplasty, if proposed in such cases, permits a satisfactory but insufficient result. With the usual technique, one cannot correct eyebrow droop or fall of the external angle, and the general aspect of "cocker spaniel eye" will not change. On the other hand, the risk of obtaining a round eye is quite high.

During facial aesthetic sculpturing, a real facial remodeling is carried out (Figs. 10 through 13) which may involve smoothing a "humpy" forehead by burring and bone grafting (Figs. 1 and 3 through 5) recontouring the orbit (Figs. 1 and 3 through 8), raising or lengthening the external angle of the palpebral fissure so as to

eliminate droopy eyelids and sad expressions (Figs. 1, 4, and 5), enlarging small eyes (Fig. 1, 3, and 5) or reducing big eyes (Fig. 8), adding bone grafts to a flat malar prominence or a sunken maxilla (Figs. 4, 5, 7, and 8), advancing or redesigning a small chin by genioplasty or bone grafts (Figs. 1, 4, 5, 7, and 8), and attenuating a heavy chin.

SURGICAL TECHNIQUE (Figs. 10 through 13)

After infiltration, a coronal approach is used either in standard fashion or with a hairline incision, depending on the individual (Fig. 10). The incision can be modified to improve a receding hairline in men or to enlarge and beautify the forehead in women. The undulating design of the incision allows better exposure for the surgeon, and the patient avoids the feeling of wearing a hair band. The infiltration should be suprapariosteal along the length of the incision and subperiosteal along the supraorbital rims and lateral orbital wall and along the entire length of the zygomatic arch.

The dissection proceeds from the temporal region, first by sharp dissection, then with a periosteal elevator, over the deep temporal fascia from the ear to the midline. The frontal dissection is in the subperiosteal plane to the level of the supraorbital rims. If a frontal re-



FIG. 4. (*Above*) A 40-year-old woman with thin skin, damaged by sun exposure. Heavy bone structure, sunken "cocker spaniel eyes" with scleral show, thin upper lip, and square chin. (*Below*) One year after facial aesthetic sculpturing and neck lift, we see the effects of important frontal orbital and malar remodeling by contouring of the bone, lateral canthopexy, bone grafts to premaxilla and chin, and periosteal graft of the upper lip.

modeling is planned, the subperiosteal level starts at the level of the incision; if not, one can start this part of the dissection 2 cm above the supraorbital rim.

The orbital approach should be atraumatic, particularly in the region of the supraorbital nerves, which are carefully liberated. The sub-

periosteal dissection then proceeds from the supraorbital rim to the lateral orbital wall and lateral orbital rim.

When the dissection of the inferolateral orbit is completed, the roof of the zygomatic arch is exposed following the curve of the deep temporal fascia. After subperiosteal dissection of



FIG. 5. (*Above*) An inexpressive face at 53 years of age. Thick, heavy skin covers the bony features and gives the face a full-moon aspect. (*Below*) Two years after facial aesthetic sculpturing and neck lift, we see the low forehead lengthened and rounded, the nose elongated, the frowning expression of the stern eyes softened by orbital remodeling and lateral canthopexy, and the effects of bone grafts of the malar prominence, premaxillary region, and chin. *Note:* It was important in this patient to rebuild the skeletal structure by applying a large number of bone grafts.

the lateral orbital rim to the level of the zygoma, these two key points are joined by using the periosteal elevator. This approach, if performed properly, avoids injury to the frontal branch of the facial nerve (Fig. 11).

The final stage of the orbital dissection proceeds from the zygoma to the malar prominence and then to the infraorbital rim and orbital floor for a distance of approximately 1 cm. This dissection is deeper in those patients in



FIG. 6. (Left) A 46-year-old woman with small, irregular forehead and round eyes. (Right) A more sophisticated face 1 year after frontal and orbital remodeling and lateral canthopexy.

whom orbital enlargement is desired. To obtain an elevation of the medial brow and nose, the dissection is continued over the nasal bones.

This completes the subperiosteal dissection. In patients with "regular" bony structure, this is sufficient to obtain the desired "lift" of the soft tissues of the upper face. In other patients, facial aesthetic sculpturing can be performed; this involves a remodeling of the facial skeleton by a combination of contour burring to smooth the forehead and orbital rims and cranial bone grafts as needed to the chin and/or malar region (Fig. 12, *above*).

A lateral canthopexy is performed next to obtain the desired shape and inclination of the eye. As part of the remodeling process, a trough is created at the lateral orbital rim to support the canthopexy. This point is chosen to provide the optimal result for facial harmony and is located between the palpebral fissure and the brow (Fig. 13, *above, left, and below, left*).

A partial galea-frontalis muscle resection as well as corrugator excision is performed. A strip of frontalis muscle can be used to augment the lips (Fig. 12, *below, left, and below, right*). The scalp excision is minimal and without tension, since the subperiosteal dissection achieves most of the lift (Fig. 13, *above, right*).

Drains are placed bilaterally in the region of the temporal dissection, and a compressive

dressing is applied. The drains and dressing are removed in 12 hours.

PREOPERATIVE OPHTHALMOLOGIC EVALUATION

The ophthalmologic examination evaluates visual acuity, fundus, ocular tension, integrity of the cornea, and lacrimal function (breakup time and Schirmer's test). It is important to detect a latent ocular deviation that may become evident after the orbital approach. With orthoptic examination, we can explore ocular motility and carry out a Lancaster test.

POTENTIAL COMPLICATIONS

Ophthalmologic Complications

Among the possible complications described, we have had to deal principally with ophthalmologic disorders. Diplopia, sometimes described as visual disorder, may be benign and transitory, resolving spontaneously in a few days. It may be due to the decompensation of a neglected latent ocular deviation. Orthoptic treatment is sufficient in most cases.

Chemosis, or conjunctival edema, is frequently a sequel to orbital dissection and lateral canthopexy. Prevention and treatment are accomplished by subconjunctival steroid injections and temporary tarsorrhaphy. Lacrimation aggravated by chemosis is very frequent in the



FIG. 7. (*Above*) At 40 years of age, a sad-looking face marked by prominent, irregular forehead, furrowed brow, prominent supraorbital rims, hollow, sunken eyes, big nose, and big, muscular chin. (*Center*) One year after facial aesthetic sculpturing, neck lift, and rhinoplasty, we see the forehead smoothed and rounded, and we note the effects of contouring of the superior and lateral orbital rims and glabella, lateral canthopexy, and malar and chin grafts. Note the medial position of the malar grafts to give fullness to the cheek. (*Below*) Long-term result, 5 years after facial aesthetic sculpturing.



FIG. 8. (*Above*) At 40 years of age, a long face with big globular eyes and a small, flat chin. (*Below*) Three and a half years after mask lift, facial aesthetic sculpturing, and neck lift, we see the results of frontal remodeling, orbital enlargement (contour burr), lateral canthopexy, malar bone grafts, raising of the nasal tip, and genioplasty (jumping bone flap).

first postoperative days. Treatment is by anti-inflammatory eyedrops after checking for corneal ulcers.

Corneal ulcers, due to intraoperative exposure of the cornea, can be avoided by viscous eyedrops or tarsorrhaphy. Postoperative treatment is with eyedrops and antiseptic ointments.

An asymptomatic dry-eye syndrome may decompensate after surgery with serious consequences.

Early Postoperative Period

Vomiting is frequent during the first postoperative night, so a night guard is provided. For



FIG. 9. Stars' eyes.

upper and lower palpebral swelling, iced compresses are recommended for 3 days.

Temporal or parietal hematoma may occur at the cranial graft donor site. If it is small, it will resorb spontaneously; if large, puncture and aspirate with a syringe.

Other possible complications in the early postoperative period are palpebral ecchymosis, transitory diplopia or troubled vision, lacrimation, chemosis, and depressive tendency during the second week.

Other Complications

Potential complications due to the subperiosteal dissection include sensitive disorders of the forehead, damage to the elevator muscle, damage to the inner canthus, intraorbital hematoma, and frontal branch paralysis. Com-



FIG. 10. A coronal approach is used either in standard fashion or with a hairline incision, depending on individual needs. The incision can be modified to improve a receding hairline in men or to enlarge and beautify the forehead in women. When a neck lift is associated, the two incisions do not join, the two dissections are on different levels, and the retroauricular incision is designed in a camel hump fashion.

pression of the globe may cause intraoperative bradycardia; the retractor must rest on the periosteal elevator, not the globe. Traction on the globe and optical nerve may cause blindness.

Complications due to cranial graft harvest may include laceration of the dura mater, cerebral trauma, meningitis, and/or damage to the longitudinal sinus.

The lateral canthopexy may lead to chemosis or asymmetry. The coronal incision may lead to hematoma, a large scar, alopecia, or loss of sensitivity in the scalp.

POSTOPERATIVE PERIOD

The first and second postoperative months are generally characterized by progressive resolution of facial and palpebral edema, relaxation of the overcorrection of the lateral canthopexy, temporary hair loss, and asthenia. In the third month, in most cases, the lateral canthopexy stabilizes, and the palpebral fissure assumes its definitive form. It is usually in the sixth month that the fine expressiveness of the face returns. One year after the operation, we see the final result.

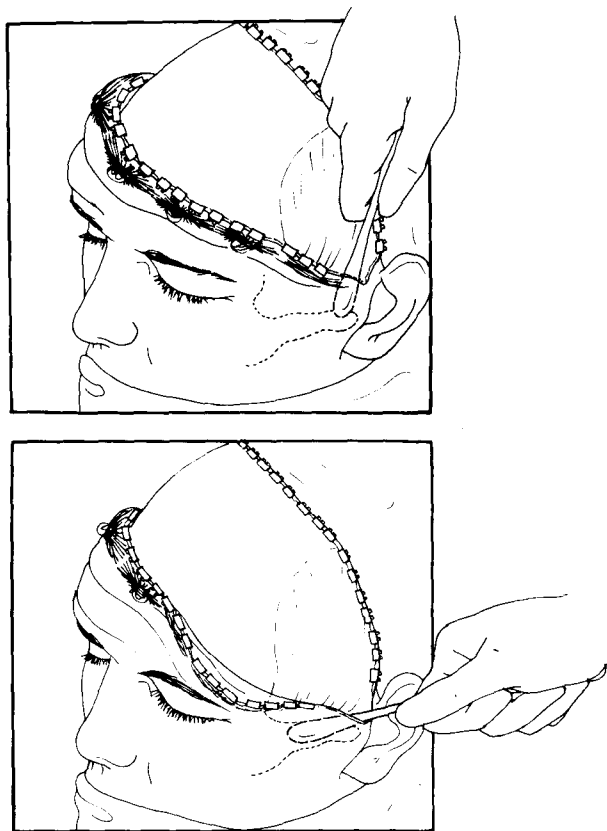


FIG. 11. (Above) Technical details. The approach to the zygomatic arch is close to the tragus. The wide Obwegeser elevator is laid flat on the temporal muscle and will follow its curve down to the superior border of the zygoma. (Below) After reaching the zygoma, the elevator is turned parallel to the arch and used as a lever.

APPLICATIONS

Frontal Region

With age, the forehead enlarges, becomes irregular, and forms furrows. The furrows are classically corrected by weakening the frontal and corrugator muscles. The "humpy" frontal bone is smoothed and rounded by grinding the humps and filling depressions with bone chips (Figs. 1, 3 to 5 and 7).

A high forehead will be diminished by a hair-line incision and a prehairline resection.¹³ A low forehead can be lengthened by excision of galea, thinning of the frontal muscle, and removal of 2 to 3 cm of scalp (taking care not to raise the eyebrows too much) (Figs. 1 and 3). A bulging forehead may be reduced by grinding. Be careful in patients who show a hypertrophic sinus (Fig. 7).

Temporal Region

Sunken temporal regions are filled out with submuscular bone grafts or polypropylene im-

plants (Fig. 4). Bulging temporal regions may be treated by removal of the temporal fat pad.

Palpebral Region

Lateral canthal dystopia (Fig. 4), round eye (Fig. 6), and eyelid laxity (Fig. 8) are corrected by grinding the external orbital margin and creating a notch that will fix the site of the canthus. Lateral canthopexy on the temporal fascia will permit elongation and raising of the palpebral fissure.

Premaxillary Region

Cranial bone grafts will correct deep nasolabial hollows and folds, a closed nasolabial angle, or a thin premaxilla (Fig. 5).

Chin

The chin holds an important position in the harmony of a face. It may be flat, square, receding, long, big (muscular), small, or droopy. With the aging process, its characteristics change. It either shrinks or becomes heavy, and it flattens, becomes square, and tends to droop (Figs. 4 and 5).

If, during a classic face lift, one does not correct a small chin, it will later seem even smaller. If the chin is square and heavy, we will not obtain the desired oval of the face.

Calvarial bone grafts in single or double layer will give the chin "body" (Figs. 4, 5, and 7); they will increase or attenuate the cervicomental relief, give the chin a form, and refine the oval of the face. Augmentation of the bony contour of a big, muscular chin will give it a better base and rejuvenate it by rendering it more solid (Figs. 4 and 7). In faces that are malformed or unsightly because they are swollen, round, heavy, or long (Figs. 1 and 8), genioplasty is often carried out either by osteotomy or by bone grafts (advancement, repositioning, augmentation, or reduction), and the aim is aesthetic amelioration and/or functional improvement (labial competence).

When malar bone grafts are inserted, the contemporary augmentation of a small or normal chin will offer a better harmonization.

Orbital Region

Apart from centropacial and zygomatic dissection, it is at the orbital level that the mask lift is particularly effective. The eyes and their "look" are the great winners with this technique; it is at this level that a real metamorphosis can be obtained. The eyes and their "look" are the

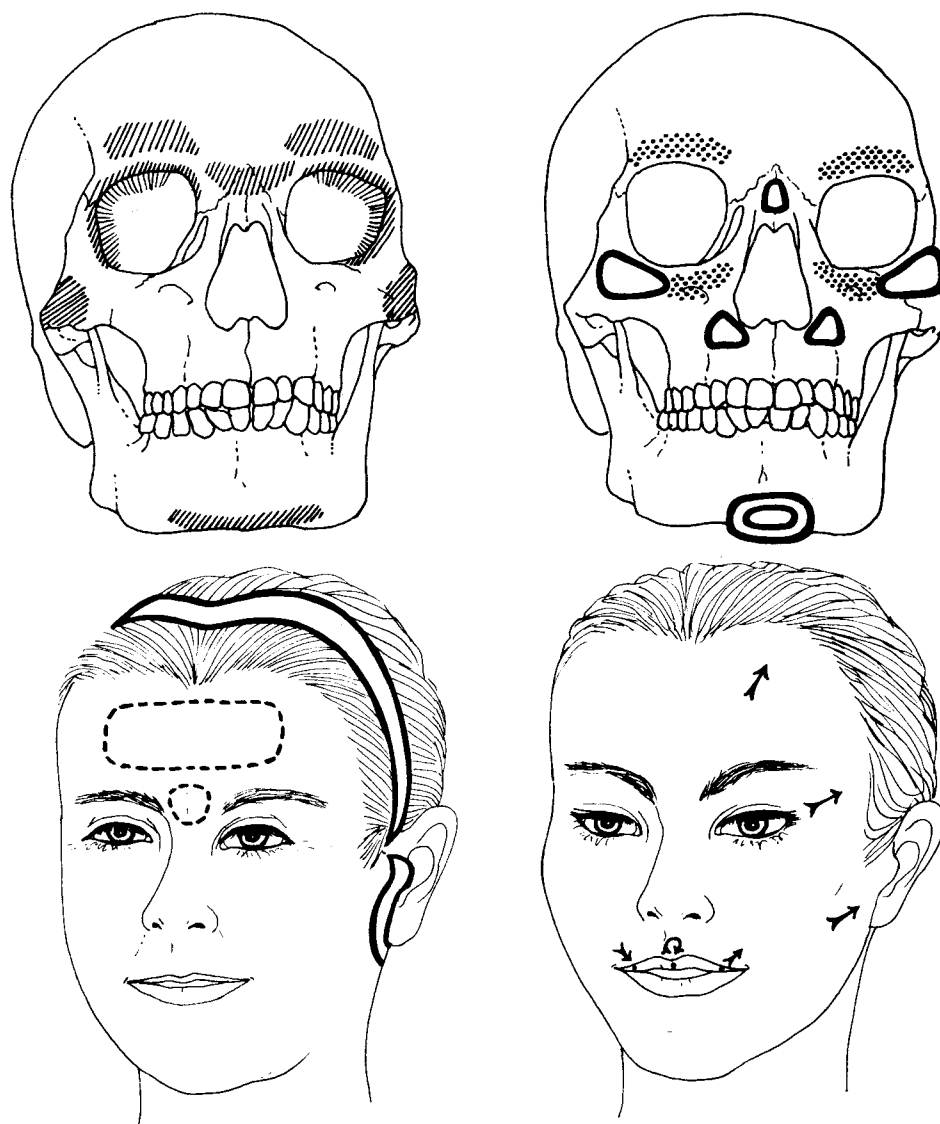


FIG. 12. (Above) Bony remodeling. (Above, left) The areas most frequently subject to contour burring to soften the forehead, change orbital shape, and reduce the chin and malar prominences. (Above, right) The bone grafts (always cranial). Solid lines indicate monocortical grafts placed in either single or double layers in the glabella, nose, cheek, premaxilla, and chin. Dotted areas correspond to bone chips either in the frontal region or on the inner lower orbital rim. (Below) Soft-tissue remodeling. (Below, left) Partial resection of the frontalis muscle and complete resection of the corrugator muscles. (Below, right) Thickening of the lips with galea grafts.

central points of the face and at the same time the most fragile and exposed.

In the "star's eye" (Fig. 9), there is harmony between the volumes of the orbital cavity and the eye—that is, a harmonious relationship between container and contents. All existing or acquired disharmonies (blepharophimosis and other malformations, Graves' orbitopathy, facial palsy, anophthalmic orbit, aging) give an antiaesthetic look to the orbital region.

One can approach correction of the stern eye (Fig. 5) and its frowning expression, the sunken

eye (Figs. 4 and 7), the exophthalmic eye, the big globular eye (Fig. 8) the "cocker spaniel eye" (Fig. 4) and its sad expression, the small eye (Figs. 1 and 3), the round eye (Fig. 6), or the paralyzed eye (lid laxity); it is also possible to diminish, to open, and to round a palpebral fissure.

The sunken eye (Figs. 4 and 7) is determined by a prominent superior orbital ridge, which can be corrected by grinding. Small eyes can be brought out by placing a bone graft on the orbital floor. In particular cases of small eye

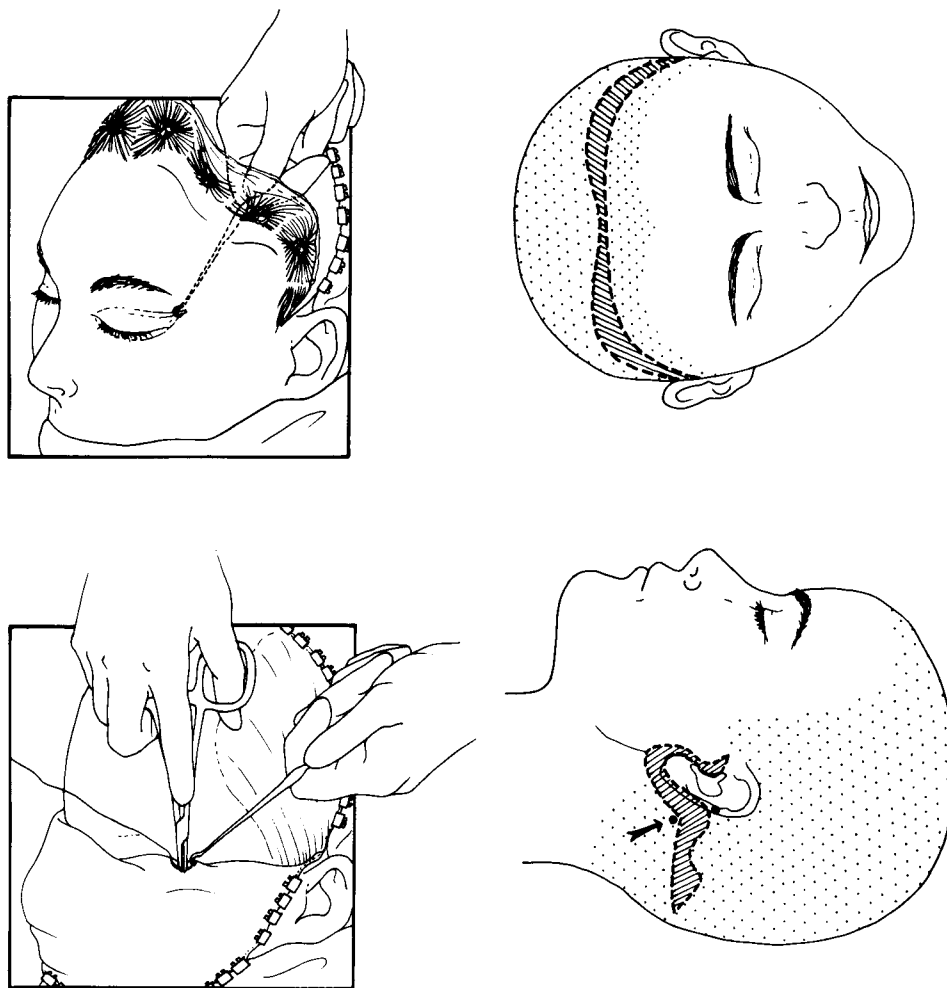


FIG. 13. Technical details of lateral canthopexy. (*Above, left*) The skin hook will not necessarily be placed on the canthus but on the spot that will give the desired slant to the eyelids. (*Below, left*) Nonabsorbable sutures are used to fix the lateral canthus to the temporal fascia. (*Above, right*) Scalp resection is important when we want to enlarge the forehead, but the flaps should have no tension. (*Below, right*) Skin resection in the neck lift will be done with a single hump.

(blepharophimosis), it is also necessary to change the form of the orbital cavity by horizontal widening (grinding of the lateral orbital wall and margin) to elongate the palpebral fissure. Large globular eyes (Fig. 8) are corrected by grinding of the orbital margins and of the inferior, lateral, and superior walls. In mild cases of exophthalmus, a lateral wall decompression is carried out, while in severe cases, the decompression is extended to the inferior and medial orbital walls. Since 1989, I have associated intraorbital fat removal according to Olivari¹⁴ with orbital wall decompression, both for Graves' disease and for large globular eyes in aesthetic cases.

RESULTS

Over the last 12 years, I have had experience using the subperiosteal technique with 350 pa-

tients. In 200 patients, the indications have been purely aesthetic; in the other 150 patients, the indication was functional. However, as we know today, the aim of the technique—whether mask lift or FAS—is not only to rejuvenate but also to embellish. This technique offers an appropriate response to the different problems of aging and of embellishment of a face, whether for reequilibration of osseous volumes or for sagging of soft tissues. Therefore, functional and aesthetic indications sometimes overlap. FAS finds its application in the aging face, in certain malformations and acquired deformities, and in young patients with unsightly features. In 110 patients, a conventional face lift has been added for the lower third of the face. In 80 patients, a perioral cavity dermabrasion has been done simultaneously.

Chin bone grafts were used in 50 percent of the patients, premaxillary bone grafts in 10 percent, and cheek bone grafts in 12 percent. Among the 200 patients, 20 men received a mask lift and 5 a mask lift plus a neck lift.

Of the 200 purely aesthetic patients, the progress of 120 could be verified at the appropriate stages of 1 month, 3 months, 6 months, and 1 year. The overall aesthetic results are very encouraging, and no facial nerve injury has been encountered.

DISCUSSION

Techniques for face lifts have evolved greatly in the last decade, thanks to authors such as Skoog, Mitz and Peyronie,¹⁵ Connell,¹³ Kaye,¹⁶ Hamra,¹⁷ and others. The biggest improvements, compared with the usual techniques, have been for the lower third of the face, especially for contouring the neck area. The anatomic studies of the SMAS by Mitz and Peyronie¹⁵ have opened new fields of research and improvements. New brow lift techniques also have been described and applied. But it is Paul Tessier who first started at Hospital Foch in Paris the adventure of sculpturing and remodeling the face 30 years ago. The mask lift with facial aesthetic sculpturing is an extrapolation of the procedures done by Tessier in the field of craniofacial surgery.

Although subperiosteal dissection had been used as an approach for forehead lift by many of Tessier's pupils since 1974, it was in 1984 that I used the total subperiosteal dissection of the upper two-thirds of the face for the first time for a purely aesthetic correction of an aging face to rejuvenate and embellish a 39-year-old woman. Since then, I have used my original technique in 200 patients for purely aesthetic reasons. The results are encouraging; it seems to me that the third-generation face lift has been born. Corrections that have not been possible with the usual technique are now possible; new requests may be taken into account. Nowadays, facial aesthetic sculpturing permits us to give an answer to requests concerning change of shape and form of the eyes and the face.

In young patients, this is especially rewarding, since, until now, the nose and the chin have been the two characteristics on which attention has been focused. The request of an old patient is more subtle. Some will ask for rejuvenation only, while others wish also a change of their expression and appearance. The decision on the procedure to be carried out is made after a

careful examination of photographs of the patient from infancy to adolescence to the present. Such an evaluation is very useful for understanding how the face has changed through the years. There are faces that maintain harmony of features through the years; in these cases, a classic procedure is proposed. There are faces in which the aging process erases all harmony, and others that have never possessed it. In these cases, FAS will permit certainly a rejuvenation but also the subtle modifications necessary to regain or achieve a more harmonious structure and expression. A sad expression of the face can be rendered more gay, the frowning expression of a face closed up on itself can regain its plenitude, and a face considered ordinary can be rendered more sophisticated.

With regard to a face, it is very important to consider the quality of the skin and the relationship between the soft tissues and the underlying skeletal structures. A thin skin will particularly enhance bony contours. To attenuate protruding bones, a contouring burr will have to be used. Bone grafts may be used in small quantities to fill hollows, taking great care to level the margins. If the skin is thick, the procedure will be reversed, since thick skin will mask the contours of the face. This kind of skin will require strong bony support to counteract tissue sagging. To improve facial contour, bone grafts may be used generously, but grinding should be kept to a minimum.

Today's face lift is no more a standard, technically well codified technique. Just as new fields of surgical activity are opened by pioneers, new requests are developing and new challenges arise. The mask lift, as facial aesthetic sculpturing, is a newcomer in the field of aesthetic plastic surgery. It takes into account the volume and structure of the face not only in three dimensions but also in a fourth dimension, which is the resultant harmony of expression.

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