The “Midface-Lift” as a Misnomer for Correctly Identifying Procedures Designed to Lift and Rejuvenate the Cheeks and Malar Regions of the Face

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Objective: To demonstrate that a classic temporal cheek rhytidectomy results in substantial and acceptable rejuvenation of the so-called midface and that additional surgery is not necessary to improve a sagging cheek, the melolabial fold, and the position of the corner of the mouth and the lateral corner of the eye.

Design: A retrospective observational study of 53 patients seen at the McCollough Plastic Surgery Clinic between 2005 and 2007. Each patient underwent temporal and cheek face-lifting surgery for various indications. All procedures were performed by the same surgeon, and the surgical technique was identical in all cases. Patient photographs were evaluated by 3 unbiased plastic surgeons who were asked to compare preoperative and postoperative elevation of the cheek mound, melolabial fold, oral commissure, and lateral canthus. Each anatomic area was appraised for improvement by each reviewer using a 4-point scale.

Results: The average patient age was 57 years, and the average patient follow-up was 11 months. Patients achieved excellent or significant improvement in a sagging cheek, melolabial fold, oral commissure, and lateral canthus in 79% (n=42), 70% (n=37), 72% (n=38), and 65% (n=34) of cases, respectively.

Conclusions: It has been written often that standard face-lifting techniques fail to address many of the aging changes seen in the cheeks. Many authors argue that a separate, unique procedure is required to effectively rejuvenate the cheek, nasolabial fold, and corner of the mouth. Our experience is contrary to this notion. The middle third facial rejuvenation can be achieved by our standard temporal cheek face-lift, and the term midface-lift may be a misnomer.

Arch Facial Plast Surg. 2009;11(4):257-262

When analyzing a patient seeking facial rejuvenation, the surgeon must assess the upper, middle, and lower thirds of the face. While brow-lifting successfully improves the upper face, and neck surgery often achieves dramatic improvement in the cervicomental angle, the aging middle third of the face has historically been difficult to rejuvenate.

Surgeons and patients both consider a deepened nasolabial fold and a descended cheek mound as obvious signs of midfacial aging. Because both surgeons and patients have found these problem areas so challenging to overcome, new procedures have been designed to improve on traditional results in the middle third of the face.

As surgical technique in rhytidectomy has evolved, innovators of these new operations have suggested that the aging middle third of the face is best corrected with an independent surgical procedure, or “midface-lift,” dedicated to this area of the face. A wide variety of midface-lifting techniques have now been described, and usually these procedures involve specific incisions, unique tissue plane dissections, and inherent complications.

The upper third of the face extends from the trichion to the glabella; the middle third, from the glabella to the subnasale; and the lower third, from the subnasale to the menton. Included in the middle third of the face are the upper and lower eyelids, the cheeks, and the nose. Other specific structures of the midface include the suborbicularis oculi fat, the temporal fat pad, the malar fat pad, buccal fat, and the superficial musculoaponeurotic system (SMAS).

Authors describing their midface-lift procedures unanimously claim that standard
rhytidectomy approaches of varying techniques do not successfully address midfacial ptosis.13-16 These surgeons often describe the descent of the malar fat as the focal point of midfacial aging changes, and many of the newer operations attempt to resuspend this fatty tissue. While older patients often require standard face-lift approaches to accomplish ideal and full rejuvenation of all thirds of the face, advocates of midface-lifting argue that many younger patients’ early aging problems can be addressed with less morbidity and less conspicuous scarring than would be required by a preauricular face-lift incision.

However, that has not been our experience. It is possible that face-lifting procedures routinely used by some surgeons do not adequately address the SMAS in the midface region. Understandably, the failure to do so may require an additional and/or separate procedure. The hypothesis of the present study is that patients wishing to achieve rejuvenation of midfacial features such as a deepened nasolabial crease and a descended cheek can be treated by means of a previously described temporal cheek-lift,17 which uses suspension and imbrication of the SMAS, and expect satisfactory results.

**METHODS**

**PATIENT EVALUATION**

The database of surgical patients of the McCollough Plastic Surgery Clinic was reviewed for patients who had undergone temporal cheek-lifting surgery between January 2005 and June 2007. Patients who underwent augmentation to their melolabial folds were excluded from the study. Patients with inadequate photographs were also excluded. Preoperative and postoperative frontal and oblique views of patients were printed out onto a single sheet of paper so that reviewers could evaluate the patients’ midfacial rejuvenation simply and efficiently (Figures 1, 2, and 3).

Reviewers were then provided with the pictures, the scoring scale (3, excellent improvement; 2, significant improvement; 1, minimal improvement; 0, no improvement), and a scoring sheet (Table) to record their scores of the patients’ results. The anatomic areas of evaluation were the cheek mound, the melolabial fold, the oral commissure, and the lateral corner of the eye. The basis and hypothesis of the study were not described to the reviewers, nor were the reviewers allowed to view or review photographs at the same time as each other. Reviewers for this study included 1 plastic surgeon, 1 cosmetic surgeon, and 1 facial plastic surgery clinical fellow. Patient age, sex, and length of follow-up were also tabulated for each patient.

Data from the reviewers’ evaluations were then combined according to anatomic subunit and summarized. Patient data were also separated by age group, and data were compared between age groups. Furthermore, scores from each anatomic site were added to each other to create a total score for each patient from a single reviewer. Total scores could therefore range from 0 to 12. A total score scale was also created to characterize these total scores. Scores ranging from 0 to 2 were deemed to represent no overall improvement; 3 to 5, minimal overall improvement; 6 to 8, significant overall improvement; and 9 to 12, excellent overall improvement.

**SURGICAL TECHNIQUE**

The temporal cheek-lift that we use has been previously described17 and involves suspension and imbrication of the SMAS.  

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Figure 1. Study patient photographs. Preoperative frontal (A) and oblique (C) views taken February 14, 2006; postoperative frontal (B) and oblique (D) views taken December 4, 2007.

Figure 2. Study patient photographs. Preoperative frontal (A) and oblique (C) views taken May 15, 2006; postoperative frontal (B) and oblique (D) views taken June 4, 2007.
All face-lifting surgery at this institution is performed under monitored anesthesia care and includes the administration of local anesthetics after induction of anesthesia.

A preauricular incision usually begins within the anterior aspect of the sideburn, extends posteriorly to an area just above the origin of the helical crus, and then turns and continues inferiorly in front of the ear. The incision is continued pretragally in men and posttragally in women.

The incision for a cheek-lift stops just above the attachment of the lobule to the cheek skin. Occasionally, an incision will continue behind the ear in the postauricular sulcus to allow for appropriate skin excision and to avoid a protrusion deformity. Preauricular dissection is performed in a radial fashion in the subcutaneous plane, superficial to the SMAS, extending for approximately 4 to 5 cm anteriorly and inferiorly from the origin of the helical crus of the ear to the lobule of ear.

After flap elevation is complete, liposuction of the jowl area is completed using a 4-mm blunt cannula. A 1- to 2-cm portion of SMAS is removed, and a plane deep to the leading edge of the SMAS is dissected off of the parotid fascia. This dissection is carried anteriorly for approximately 2 cm. At this point in the operation, transposition of the SMAS flap in a posterosuperior direction achieves dramatic improvement in all midfacial features, including the nasolabial crease and the cheek mound.

Next, imbrication of the SMAS is performed with several interrupted 2.0 Vicryl sutures (Ethicon Inc, Somerville, New Jersey). Finally, the skin is advanced in a superior and posterior vector and closed without tension (Figure 4). The temporal incision is made back in the hairline, and dissection is performed in the subgaleal, supratemporalis fascia plane. Blunt dissection is carried out inferiorly where the temporal flap is released from the arcus marginalis of superior orbital rim. Stainless steel staples are used in the hair bearing areas.

Since the early 1990s many surgeons have expressed concern over rejuvenation of the middle third of the face achieved via standard face-lifting operations. Beginning around this time, the field of plastic surgery has been experiencing a near revolution with the advent, development, and refinement of the midface-lift, a procedure dedicated specifically to rejuvenation of the aging anatomy of the middle third of the face. A detailed history of this evolution, which is beyond the purpose of the present article, can be found in the thorough review by Paul et al.18 We propose that use of the term midface-lift is unnecessary and that a more appropriate and time-tested description is simply cheek-lift.

In the present study, a random, consecutive, and typical group of 53 cosmetic surgery patients from a single high-volume practice of a senior plastic surgeon (E.G.M.) were evaluated for postoperative improvement in midfacial features after a sub-SMAS suspension imbrication rhytidectomy. Many of these patients underwent full temporal cheek- and neck-lifting in addition to other procedures; however, only midfacial features were evaluated. While advocates of the midface-lift seek greater improvement in areas such as the nasolabial crease and the malar fat pad, the results of this study demonstrate that rejuvenation of much of the middle third of the face can be achieved through this procedure.
temporal cheek-lifting operation alone, provided the midface SMAS is adequately managed. Advocates of the midface-lift have also conducted studies evaluating midfacial features after midface-lifting. However, in many of the articles analyzing outcomes with midface-lifting, patients also underwent other procedures such as rhytidectomy via preauricular approach.6,13

The present study does not seek to suggest that a temporal cheek-lift is the right operation for all patients; however, for patients without aging changes in the neck, it may be all that is required. One legitimate weakness of this study is that some patients underwent simultaneous neck-lifting. Though reviewers were specifically instructed to evaluate only certain anatomic subunits of the middle face, and no lateral photographs were provided, a patient’s excellent neck-lift result could possibly cast bias into the mind of a reviewer’s evaluation of other facial areas. An ideal study to discern the best operation for the midface would be one in which a body of patients with indications for midfacial rejuvenation were randomized to either a classic temporal cheek-lift or some other form of a midface-lift.

Another option would be a head-to-head study in which patients from 2 different surgeons were evaluated by the same blinded reviewers postoperatively. One group, of course, would undergo temporal cheek-lifting as described herein, while the other group would undergo some form of a dedicated midface-lift. Patients in this study, who underwent a specific but classic sub-SMAS suspension imbrication rhytidectomy, had many of the same indications of midfacial aging as patients in other centers who have undergone midface-lifting. In Figures 1, 2, and 3, obvious improvements can be seen in the midfacial subunits. These patients represent patients who received some of the highest scores from the reviewers of this study.

Describers of midface-lifting cite a variety of indications for their proposed procedures. For example, some state that the midface-lift is a procedure for a younger patient who seeks to improve the appearance of the midface with a minimally invasive procedure.13 In the present study, patients of all ages achieved similar overall improvement in midfacial features. Furthermore, one could certainly argue that the temporal cheek-lift described in the present article is no more invasive than many of the midface-lifts described in the literature.

Other authors cite specific deformities such as the “cheek hollow,” “orbital hollow,” “double contour,” or “teartrough deformity” as indications for a dedicated midface-lift.6,13,19 Naturally, a wide variety of midface-lifting techniques have now been described. With different techniques come new risks to the patient. New techniques in midface-

Table. Example Scoring Sheet for 9 of the 53 Study Patients

<table>
<thead>
<tr>
<th>Patient No.</th>
<th>Cheek Mound</th>
<th>Melolabial Fold</th>
<th>Corner of Mouth</th>
<th>Lateral Canthus</th>
<th>Total</th>
</tr>
</thead>
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<td>0</td>
<td>0</td>
<td>0</td>
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<td>3</td>
<td>2</td>
<td>3</td>
<td>9</td>
</tr>
</tbody>
</table>

A score of 3 indicates excellent improvement; 2, significant improvement; 1, minimal improvement; and 0, no improvement.
lifting include a variety of dissections and planes, approaches and incisions, and vectors and suspensions. Some surgeons continue to apply only supraperiosteal dissections stating that subperiosteal operations result in prolonged postoperative edema and greater risk of nerve injury.20 Others argue that only subperiosteal dissection achieves adequate liberation of facial soft tissues from the underlying skeleton.18,21-23 The lower blepharoplasty incision has been a common technique for surgeons to approach the midface.7,19,24,25 Other incisions include those in the temporal and sublabial areas. In terms of final support, controversy continues regarding the best methods to lift tissues. While most procedures use a posterior superior vector, recent publications suggest that a more vertical vector is better.12,18,26 Commercial devices have been developed to resuspend midfacial structure in a minimally invasive, even percutaneous fashion.12,13

In terms of the unique risks associated with these procedures, complications cited by surgeons performing these procedures include changes in the lateral canthal appearance and infraorbital numbness.15,13,10,27 Patients undergoing subperiosteal dissections have consistently experienced prolonged postoperative edema. During the temporal cheek-lift used for the present study, risks to the patient are minimized by using maximal direct visualization and adhering to a time-tested operation with proven long-term results.

Aesthetic surgeons in the 21st century face challenges that our predecessors never imagined. Ours is an era in which long-standing surgical procedures are being renamed at almost record speed. Many are given trademarked and commercially driven identities. Because of this trend, it is important that mainstream plastic surgery develop nomenclature that accurately describes the procedures and techniques designed to address specific anatomic regions or structures of the face and body.

One such example of confusion is the term midface-lift. The label appears to be inappropriately applied to procedures that tend to lift areas and structures beyond the middle third of the face. At the same time, midface-lifts often fail to address areas that exhibit sagging tissues within the middle third of the face. The fact that such confusion exists within plastic surgical circles suggests that rejuvenation techniques designed to enhance the appearance of the middle third of the face need to be revisited.

On reviewing the long-standing criteria of facial analysis described by Leonardo da Vinci, the observer will note that the middle third of the face begins at midthrow and ends where the nose joins the upper lip. Many areas within this region are not affected by the procedures described in the literature as midface-lifting.18 At the same time, other regions—outside the middle third of the face—are. For example, a well-performed cheek-lift tends to improve portions of the melolabial groove that extend well into the lower third of the face, even to the lateral corners of the mouth. Some procedures (referred to as midface-lifts) do not improve the lateral canthal regions, upper eyelid, or infrabrow regions, which (using da Vinci’s criteria) clearly lie within the middle third of the face.

We propose that using the term midface-lift to describe surgery intended to improve the cheek and malar region is a misnomer and that a more appropriate term or terms should be used. Procedures performed through a blepharoplasty approach designed to lift the malar region should be referred to as malar-lifts. Procedures that lift the cheeks, malar and lower cheek regions should be identified as cheek-malar-lifts. And procedures that lift the temporal, lateral canthal, and brow regions as well as the cheek and malar regions should be described temporal cheek-malar-lifts.

Properly identifying the areas affected by the procedures will minimize confusion in the plastic surgical literature and in teaching circles. It will also be easier for surgeons to communicate with each other and to properly inform patients about the intended results of the named operations under consideration.

To explain the plethora of recent literature on midfacial rejuvenation, it is often said that when there are many ways to combat a single problem, no single method provides the ideal solution. We suggest that no new procedure is required to achieve excellent improvement in the midface when a classic temporal cheek-lift with SMAS suspension and inbrications works just fine in obtaining such results.

Accepted for Publication: April 7, 2009.

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Author Contributions: Dr Scurry had full access to all of the data in the study and takes responsibility for the integrity of the data and the accuracy of the data analysis. Study concept and design: McCollough, Scurry, and Shirazi. Acquisition of data: Scurry. Analysis and interpretation of data: Scurry and Shirazi. Drafting of the manuscript: McCollough and Scurry. Critical revision of the manuscript for important intellectual content: McCollough, Scurry, and Shirazi. Statistical analysis: Scurry and Shirazi. Administrative, technical, and material support: Scurry and Shirazi. Study supervision: McCollough.

Financial Disclosure: None reported.

Additional Contributions: Konstantin Tarashansky, MD, and Lucy Tarashansky provided conversation and advice regarding statistical analyses.

REFERENCES


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