Discussion

Surgical Anatomy of the Ligamentous Attachments of the Lower Lid and Lateral Canthus


Surgical Anatomy of the Midcheek and Malar Mounds


Discussion by Sam T. Hamra, M.D.

As so often occurs in plastic surgery, a new or untried surgical procedure is developed, results are promising, interest is heightened, and, finally, someone has the intellectual curiosity and skillful patience to define and describe the anatomy of the area. The authors have presented us with an elegant description of the anatomy of the lower eyelid and midcheek, an integral area of facial rejuvenation that had been ignored in the past but has become the focus of achieving harmony in face lifting. Their cadaver studies using varying age groups broaden the understanding of the topography of the aging face. Although explanations of aging changes of the lower eyelid/cheek interface have been the subject of endless discussions and reports by plastic surgeons, I think these two articles represent the most clear and detailed study that I have seen. In the article by Muzaffar et al., Figure 13 is an excellent example of understanding facial changes by applied anatomy. As the authors simply point out, the “grooves overlie ligamentous attachments, and the bulges overlie ‘spaces.’” How much clearer could it be?

While reading the articles I experienced a déjà vu of an experience I had in 1990, when after doing the deep plane face lift for 5 years and elevating the subcutaneous fat pad off of the zygomaticus muscles, I was so pleased to read Jack Owsley’s detailed description of “malar fat” based on his published cadaver studies. It seemed that I knew how I got there, but I did not really know where I was! I had the same feeling after reviewing these articles, because 11 years ago I crashed through the orbicularis retaining ligament (see Figure 2 in the article by Muzaffar et al.) in my attempt to include the orbicularis in the face lift flap, which was the beginning of the development of the composite rhytidectomy. For that early procedure, the lateral orbital thickening (see Figure 5 in Muzaffar et al.’s article) was less significant to me than it is today, and I thank the authors for this knowledge. My advance to include the zygomaticus muscles with the orbicularis oculi (the zygorbicular dissection) is essentially the prezyomaticus space described by the authors in the article by Mendelson et al., and again I thank them for this knowledge.

Simply stated, anatomy is only anatomy; how the surgeon makes use of it determines the
benefit to the patient, which is our ultimate goal as plastic surgeons. Although no patient photographs accompany these articles, their exposure to the clinical application of their impressive work is based on the innovative technique of Byrd, whose periorbital rejuvenation is accomplished by using an endoscope. Byrd believes strongly that the orbicularis must be spared a subciliary incision, and that the vector of orbicularis movement as shown in Figure 12 of the article by Muzaffar et al. should be superolateral. On the other hand, my approach is as in Figure 7 of the article by Mendelson et al.; I use only a lower blepharoplasty in every case and incur no nerve injury.

Because my experience preceded this study by several years, I can offer several principles I have learned (sometimes painfully) for operating in the area of the eyelid-cheek interface that may be of benefit to surgeons considering surgery in this often treacherous area. As the authors kindly state, the “zygorbicular face lift approach was developed in recognition that the lower lid provides a simpler and safer approach to the midface, through the area now known to be the prezygomatic space, and possibly a safer approach to release of the zygomatic ligaments.”

1. The vector for repositioning the ptotic aging orbicularis is best done in a superior medial vector, because the malar crescent or malar mound descends with age in an inferior lateral vector. Therefore, this vector is simply reversed for optimal correction in rejuvenation. Figure 1 shows correction of the malar crescent in a 50-year-old patient who underwent a primary composite face lift using the zygorbicular approach. This approach is also invaluable when correcting the recently described exaggerated malar crescent or mounds that often result following conventional face lift and blepharoplasty surgery.

2. The orbicularis should stay in continuity with the zygomaticus musculature rather than be repositioned alone. This will prevent potential muscle dystonia from nerve injury, as demonstrated in Figure 7 of the article by Mendelson et al., and will allow a stronger purchase for fixation of the elevated cheek flap to the lateral orbital rim periosteeum. In 1991 in a 52-year-old patient, I performed a composite face lift in which the orbicularis was separated from the zygomaticus, as I did in the earliest composite face lifts; Figure 2 shows the patient preop-

![Fig. 1. (Left) A 50-year-old patient with an obvious malar crescent (malar mound) as a normal anatomic structure. (Right) Correction of the malar crescent 1 year after a composite face lift, including an arcus marginalis release and a zygorbicular flap.](image-url)
Fig. 2. (Above, left) Preoperative view of a 52-year-old patient. (Above, right) Results 1 year after a composite face lift in 1992 with repositioning of the orbicularis muscle. Note the narrower diameter of the soft-tissue periorbit. (Below, left) After 7 years, in 1998 there has been relaxation of all areas of the face, but the orbicularis repositioning has remained constant, as seen by the same vertical diameter. (Below, right) Three years after a secondary composite face lift, including an arcus marginalis release and a zygomaticus-orbicularis (zygorbicular) flap, there is visual obliteration of the inferior border of the soft-tissue periorbit and no sign of underlying bony anatomy; that is, the anatomy of youth.

eratively (above, left) and 1-year postoperatively (above, right). Figure 2, below, left, shows the same patient in 1998 with correction of the periorbital aging that remained acceptable and stable, as shown by the unchanged vertical diameter of the periorbit 7 years after the earlier operation. She underwent a second composite face lift in 1998. Figure 2,
below, right shows the results of a 3-year post-
secondary composite face lift using the zy-
gomaticus-orbicularis (zygorbicular) tech-
nique. The orbicularis repositioning is far
superior to the results obtained with the
patient’s first procedure. Without a visible
discernible lower border of the soft-tissue
periorbit, a vertical distance cannot be mea-
sured (?).

3. Orbicularis repositioning must be com-
bined with an arcus marginalis release8 and
septal reset for optimal periorbital rejuvena-
tion, and this requires a subciliary incision,
which has no ill effects. As seen in Figure 2,
below, right, this combination can oblitera-
the various aging structures shown by
Muzaffar et al. in Figure 13 of their article
and can totally obscure the bony landmarks
to produce the anatomy of youth as in their
Figure 11.

4. The zygorbicular midface dissection, as the
authors correctly state, must never commu-
nicate with the prezygomaticus deep plane
dissection, because nerve injury could oc-
cur. In the composite face lift, the “ligamen-
tous wall” described by Mendelson et al. is
what I have called the “meso-zygomaticus,”
shown in Figure 3, left. This structure, along
with the meso-mandibularis and the meso-
temporalis, allows the surgeon to accom-
plish a comprehensive repositioning of all
of the structures (skin, muscles, and fat)
of the aging face in multiple vectors (Fig.
3, right) while preserving the nerves that
these mesenteries harbor and guard. Fig-
ure 4 best demonstrates the zygorbicular
space I reported in 1998,5 which is precisely
the prezygomaticus space the au-
thors now describe. The “ligamentous
wall” is the osseous attachment of the or-
igin of the zygomaticus muscles and cre-
ates the caudal border of the zygorbicular
space.

Those surgeons who believe that periorbital
rejuvenation is an obligatory part of the sur-
gery to achieve harmony in facial rejuvena-
tion will be grateful to the authors for this superb
and well-illustrated anatomic study. No doubt these articles will help demystify the secret caverns and compartments of the lower eyelid and cheek and thereby encourage young surgeons to further advance the surgical perimeters of facial rejuvenation.

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REFERENCES

FIG. 4. (Above, left) Side view of normal facial anatomy with the patient supine. (Below, left) The zygorbicular dissection is elevated through the subciliary incision, and the deep plane face lift dissection is elevated from the preauricular incision. (Above, right) The arcus marginalis release has been done. The septum is reset over the orbital rim. (Below, right) The composite movement is still accomplished with a soft-tissue mesentery that includes the zygomaticus musculature and does not inhibit flap mobilization and advancement. (From Hamra, S. T. The zygorbicular dissection in composite rhytidectomy: An ideal midface plane. Plast. Reconstr. Surg. 102: 1646, 1998.)