

# Surgical Anatomy of the Ligamentous Attachments in the Temple and Periorbital Regions

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*Discussion by Fritz E. Barton, Jr., M.D.*

This article is an exhaustive and beautiful atlas of the fascial systems of the upper face. To my examination, it contains little new information but rather consolidates the work of many predecessors in a readable, orderly fashion. Most of the significant previous contributors, perhaps with the exception of Byrd and Ramirez, are dutifully acknowledged in the extensive bibliography.

Because the article is encyclopedic, I will confine my comments to a few specific issues.

The area of the temporal fascial fusion planes extending downward to attach to the orbital rim (superior temporal septum, temporal ligamentous adhesion, supraorbital ligamentous adhesion) have been emphasized as being surgically critical to achieving adequate elevation of the lateral brow. The reader might prefer one descriptive term to another (Knize's versus the authors'), but the surgical key is to acknowledge the facial attachments in the forehead and brow and then to release them adequately. The reader should be aware that this discussion is confined to the subgaleal approach to forehead lift; release of the orbital rim using the subperiosteal approach is a somewhat different sequence.

The second area of importance is the pathway allowing one to safely extend a temporal dissection over the zygomatic arch into the upper cheek without damaging the temporal (frontal) branch of the facial nerve. This pathway has been detailed extensively by Ramirez and by Byrd.<sup>1-8</sup> It is generally agreed that penetrating what Moss et al. call the "inferior temporal septum" is important to leave a protective barrier covering the motor nerve branches located in the "ceiling" of the dissection space.

This barrier should be maintained all the way down to the zygomatic arch. If dissection is continued into the cheek, then elevation of the periosteum of the middle one-third of the zygomatic arch likely should be included. However, some would disagree with carrying the plane as deep as the "deep fascia" (deep temporal fascia?) if it means elevating the fat pad located within this triangular compartment. Devascularization of this elevated fat can lead to visible temporal hollowing. Confusion over this dissection pathway arises because of the variety of nomenclature used to describe these intersecting facial layers.

Although the authors' categorization of the retaining ligaments of the face seems orderly, I must confess that I have seldom been fortunate enough to happen upon a zygomatic retaining ligament that was "a discrete cylindrical arrangement of fibrous tissue, surrounded by fatty tissue." In my personal dissection of hundreds of cheeks, I find the virginal retaining ligaments to be more a patch of fibrous adherence. Frequently, they are made to coalesce into a solitary "ligament," not by nature, but by spreading scissor dissection. Although this minor point makes little surgical difference, I am sympathetic to the bewilderment of young surgical anatomists who search desperately to get a glimpse of a glistening, white, tendon-like structure.

The authors properly emphasize, however, that it is mainly fibrous adherent areas (retaining ligaments and investing fascias) that restrain beneficial advancement of a subSMAS face lift flap. The extent of dissection should therefore be determined not by a predetermined line drawn on the surface of the skin but by the adequate re-

lease of adherence. Once achieved, the dissection should be terminated; further advancement merely transects additional lymphatic drainage and prolongs recovery.

Without doubt this elegant treatise will serve as a valuable illustrated reference for surgical anatomists seeking to uncover the secrets of face lifting. But what remains an enigma is why the patient, in the initial consultation, can elegantly reposition his or her ptotic facial skin using only the fingertips, without the surgical release of any of these fibrous shackles!

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