Modifications to an Approach for Correcting Midfacial Aging With a Periosteal Hinge Flap

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“Second Thoughts” focuses on ways in which aesthetic plastic surgeons have modified or even dramatically changed their techniques over time to achieve optimal results. Contributors are Aesthetic Society members and other recognized experts.

The initial description of my approach to correcting midfacial aging with a periosteal hinge flap was based on my belief that a vertical correction would be most appropriate. Certainly the transverse dimension of the orbit that is the greatest dimension in youth rotates 90 degrees and becomes a vertical oval with aging. A canthoplasty is required in a pure lateral vector correction to prevent destabilization of the lower lid. I wanted to avoid a lateral canthotomy as a necessary part of the canthoplasty. Most plastic surgeons are relatively uncomfortable with repositioning the lateral canthus, especially in the patient undergoing surgery for aesthetic reasons. Although the resultant minor discrepancies often improve with time, they can be a source of anguish to the patient and the physician.

Now that I have performed a number of midface advancements with the periosteal hinge flap, I strongly believe that more substantial stabilization laterally is required. I do not believe that a lateral canthotomy and canthoplasty are necessary, except in those patients who have preexisting lid retraction from either cicatricial or senile changes. I believe that support of the lower lid with the use of an inferior retinacular lateral canthopexy or canthoplasty is most helpful in stabilizing lower lid position.

To further ensure stability to the lower lid and to correct any level discrepancy where the orbicularis was divided laterally, a medially based orbicularis oculi flap is sutured over the fascia laterally before final skin trimming and closure. This will provide excellent contour lateral to lateral orbit rim, as well as additional support for the lower lid. I believe that the inferior retinacular lateral canthopexy adds substantial support to the lower lid, there-by preventing retraction as a result of the substantial advancement of the midface soft tissues (Figures 1 and 2).

If an incision has been made to correct redundant upper eyelid skin, the lateral part of the incision can be accessed for the inferior retinacular advancement. This is performed by creating a tunnel beneath the orbicularis, identifying the inferior retinaculum, and advancing it to the lateral orbital rim at the appropriate level. It is easier to adjust the lid position through the upper eyelid laterally than it is to visualize this through the lower eyelid.

This procedure has been described by Jelks et al. and is easily performed without distorting the lateral fissure. If the lid will not move by merely lifting this structure, then the inferior retinaculum can be divided for a short distance to allow mobilization. The lid should be relatively tight after the suture is tied, and often a second suture is required with knots buried inside the orbit. The lid should be snug against the globe without separation lat-

Figure 1. Forceps holding lower lid at elevated position after lifting inferior retinaculum.
erally creating a tear lake. If the lateral aspect of the lower lid is gently tugged with forceps, the improved stability will be identified if the sutures have been appropriately placed. These changes in the technique that I described last year provide a margin of safety in terms of lower eyelid position, thereby decreasing the need for lower lid revision for asymmetry and inappropriate position of the lower lid relative to the inferior conical scleral limbus.

At this point, the midface can be advanced to the periosteal hinge flap, and a lateral suture to the deep temporal fascia can be performed for further advancement of the flap. In some cases I now add a lateral vector advancement through a temporal skin incision. This is performed by dissecting anterior to the deep temporal fascia to the level of the superior lateral orbital rim and then connecting this dissection with the lower eyelid dissection. By using a 3-0 polydioxanone suture passed through the tunnel and anchored to the deep temporal fascia at the level of the temporal incision, I can obtain excellent stabilization of the midface flap, thereby diminishing the risk of downward pull of the lower lid. A combination of the lateral vector with the vertical vector has resulted in substantial midface rejuvenation.

References

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