

Endoscopic Temporal-Incision Only Midface Lift Is Enhanced By Endotine Technique

The Endotine midface technique, through an endoscopic temporal-incision only approach, is the author's preferred method of malar fat pad suspension and fixation. The bioabsorbable Endotine device avoids an intraoral incision, eliminates sutures, offers multipoint fixation, and the leash fixation mechanism provides fast and simple adjustability for optimal control of midface elevation and volume. (*Aesthetic Surg J* 2005;25:80-83.)

There are many different techniques that have been introduced for treating the aging midface. Paul,¹ Hester,² Ramirez,³ and others have clearly defined the anatomic structures and findings common to an aging midface and have offered different treatment options.

Stimulated by the work of these pioneers, I have been using their approaches over the past few years. A significant change in my technique occurred, however, when I introduced direct percutaneous needle fixation into my practice. It was then that I changed my technique to an endoscopic temporal-incision approach.⁴

Surgical Technique

My technique involves careful preoperative evaluation and planning, including detailed assessment of midface position, shape, and volume. Photographs of the patient at a younger age are also useful.

First, make preoperative markings to outline the anatomical structures for endoscopic dissection and the vectors of suspension. The entry point at the temporal region should be about 2 cm behind the hairline. To perform a simultaneous browlift, or to further facilitate endoscopic dissection, paramedian coronal incisions can be added. Perform the dissection laterally above the deep temporal fascia and extend it down along the lateral orbital rim into the malar region in a subperiosteal plane. For the treatment of the midface, continue dissection medially and laterally on zones 1, 3, 4, 5, and 6 (Figure 1). Visualize and preserve the inferior orbital nerve.

Identify and divide the masseter fibers attached to the malar bone. This simple maneuver will facilitate easier suspension and will also prevent early relapse of the midface elevation. The inferior border of the dissection is the

superior gingival sulcus and is the point at which you may perform complete release of the periosteum. Following these maneuvers, you can complete direct percutaneous needle fixation (Figure 2).

The endoscopic temporal-incision technique permits precise positioning and fixation of soft tissues with predictable outcomes. The subperiosteal dissection provides adequate blood supply to the skin flaps and allows the simultaneous use of skin resurfacing modalities such as lasers and chemical peels. The disadvantages of this technique are that it relies on suture suspension only, may result in minor asymmetry because of different vectors for fixation, and involves a long learning curve.

Since October 2003, I have adopted the Endotine midface device (Coapt Systems, Palo Alto, CA) as my preferred method of suspension and fixation for malar fat pad elevation. The surgical technique for dissection is the same as previously described. The deployment system protects the implant during insertion, and deployment is achieved with a simple trigger release to engage tines to soft tissue (Figure 3). Digital pressure engages the tines (Figure 4). Once the soft tissue is engaged, the insertion tool is removed through the temporal incision (Figure 5). Tension is applied to the anchoring leash to achieve the desired elevation. The leash is then sutured to the temporal fascia and the excess leash is trimmed (Figure 6).

Conclusion

This easy, step-by-step midface suspension-fixation device enhances soft tissue fixation, provides simple adjustability for optimal elevation and projection, and maintains mechanical fixation until biologic fixation is adequate. The 5 tines provide multiple points of contact for secure soft tissue fixation. The elevation forces are evenly distributed over a wide area, eliminating skin irregularities. Insertion and deployment are easily accom-



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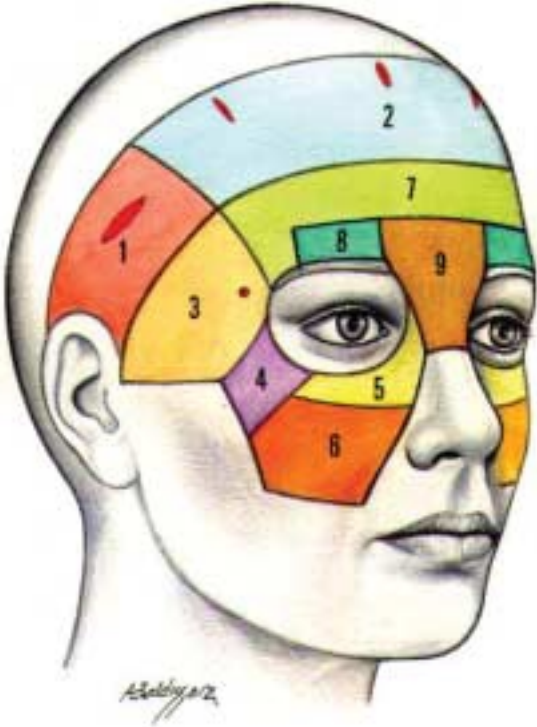


Figure 1. Endoscopic facial zones in a subperiosteal plane of dissection.⁵



Figure 2. Markings for midface suspension using the direct needle fixation technique. (Images 2 through 6 courtesy of Coapt Systems.)



Figure 3. Insertion of the midface device through a temporal incision. The midface device protects the implant during insertion and has a trigger release to engage tine to soft tissue.



Figure 4. Once in position, the trigger mechanism retracts the protective cover from the fixation platform. Digital pressure engages the tines.



Figure 5. Once the soft tissue is engaged, the insertion tool is removed through the temporal incision.



Figure 6. Tension is applied to the leash to achieve the desired elevation. The leash is then sutured to the temporal fascia. Excess leash is then trimmed.



Figure 7. A, C, E, Preoperative views of a 52-year-old woman. **B, D, F,** Postoperative views 6 months after endoscopic brow lift and midface lift with a temporal incision only.



Figure 8. A, C, E, Preoperative views of a 40-year-old woman. **B, D, F,** Postoperative views 1 year after endoscopic brow lift and midface lift with a temporal incision only.

plished through the temporal incision. Implant palpability is minimal, and reabsorption starts at 6 months.

Although follow-up has been only 1 year, I believe that the Endotine midface technique through an endoscopic temporal-incision approach offers many advantages: (1) it avoids an intraoral incision; (2) it eliminates sutures; (3) the deployment is simple, secure, and offers multipoint fixation; (4) the device is bioabsorbable; and (5) the leash fixation mechanism provides fast and simple adjustability for optimal control of the elevation and volume of the midface.

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Note: Dr. Saltz is a member of the Coapt medical board but has no financial interest in the company.

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