CHAPTER

49 Brow Lift

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Procedures aimed toward addressing brow ptosis and forehead/glabellar rhytids. Approaches include endoscopic, trichophytic (subgaleal and subcutaneous), and coronal. While all techniques address brow ptosis, treatment planning is often guided by cosmetic diagnoses, surgeon preference, and supplemental procedures such as bony orbital recontouring, muscle resection, hairline repositioning, and concomitant upper blepharoplasty.

General Indications

1. Brow ptosis
2. Brow asymmetry
3. Deep rhytids and furrows traversing the forehead, glabella, and/or nasal radix
4. Appearance of heavy or redundant forehead and temporal skin
5. Pseudoblepharoptosis and/or visual field restriction

General Contraindications

1. Lagophthalmos
2. Previous or current dry eye symptoms
3. Unrealistic patient expectations

Anatomy

Supraorbital nerve: Exits the superior orbit parallel to medial limbus. The nerve forms branches, which innervate the frontoparietal skin (deep branch) and upper eyelid (superficial branch).

Supratrochlear nerve: Exits the superomedial orbit and is located 9.0 mm (±3 mm) medial to the supraorbital nerve. Innervates the skin of the lower forehead (midline glabella), the medial upper eyelid, and a portion of the conjunctiva.

Sentinel vein: Located approximately 10 mm lateral to the zygomaticofrontal suture. Serves as a warning for the proximity of the temporal branch of the facial nerve.

Temporal branch of the facial nerve: As the temporal branch courses superiorly to the zygomatic arch, it is located within or along the undersurface of the temporoparietal fascia. The temporal branch provides motor innervation to the brow musculature and the superior portion of the orbicularis oculi muscle. The anticipated course of the temporal branch can be approximated by drawing a line from a point 5 mm anterior to the tragus to a point 15 mm lateral to the lateral taper of the ipsilateral brow.

Conjoint (*conjoin*) tendon: The fusion of the galea, superficial, and deep temporal fascia and periosteum/pericranium within the anterior temporal region.

Preoperative Markings

1. Patients are marked preoperatively while sitting upright.
2. The brow lift is simulated with manual manipulation of the brows prior to placing the patient supine, and the desired vectors of pull are marked.
3. Important markings include: incision sites, skin to be resected, and the anticipated location of nerves (supraorbital, supratrochlear, and temporal nerve).
4. Standard preoperative photographs are taken and placed in the operatory within the surgeon's field of view for reference during the procedure.

Endoscopic (Closed) Brow Lift

Indications

1. Circumvent need for trichophytic or visible scar
2. Patient preference for less invasive procedure
3. Patient with short to normal upper facial third (less than 6 cm from brow to hairline.) Note that endoscopic procedure may raise hairline.

Contraindications

1. Excessive hairline recession
2. Excessively curved forehead inhibiting the passing of endoscopic instruments to periorbita

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