Endoscopic Forehead Lift

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Shoib Myint D.O.

Myint Oculo-Facial Plastic & Cosmetic Surgery

Las Vegas
External browpexy a minimally invasive alternative to temporal brow suspension


Guy Massry MD
Patient Types?

- Young (20’s, 30’s)
- Middle aged
- Older

eyes opened
aging periorbital
facial rejuvenation
Advantages

- Accuracy
- High patient acceptance
- Minimal alopecia
- Less recurrence
- Less numbness
Goals

- Elevate brow
- Decrease forehead rhytids
- Decrease vertical glabellar rhytids
- Elevate lateral canthal hooding
- Decrease infraorbital skin
Release, not Fixation

Soft Tissue Modification, not Traction, Resection
Muscles Of The Forehead

1. Frontalis
2. Orbicularis Oculi
3. Depressor Supercilii
4. Procerus
5. Corrugator
Forehead Musculature

- Myotomu
- Myectomy
- Detachment
- CO2 laser
  - 250mj, 8W
- Curved scissors
Procedure

- **Marking, anesthesia, incision**
- Blind creation of optical cavity
- Temple dissection
- Frontal dissection with muscle release, myotomy and/or neurotomies
- fixation
Anesthesia

- Nerve blocks (1% lidocaine, 1:100,000 epi)
  - V1
    - Supraorbital, supratrochlear, lacrimal br.
  - V2
    - Zygomaticotemporal, zygomaticofacial
  - V3
    - Auriculotemporal
Anesthesia

• Rest of forehead and brow
  o .25% lidocaine, 1:400,000 epi
Procedure

- Marking, anesthesia, incision
- **Blind creation of optical cavity**
- Temple dissection
- Frontal dissection with muscle release, myotomy and/or neurotomies
- fixation
• **Subperiosteal**
  - Forehead length consistent

• **Subgaleal**
  - Increases forehead length

• **Subcutaneous**
  - Pretrichial/trichophytic, lower forehead

• **Composite of these three planes**
Subperiosteal Dissection

- Lymphatic and vascular channels are not disrupted
- Less edema, hemorrhage
- Nearly bloodless
- Better anatomic visualization
- Better optical cavity
- Safer plane of dissection with sensory nerve preservation
- Maintains forehead length
Tissue Undermining

- Standard foreheadplasty
- Extended foreheadplasty
- Limited foreheadplasty
- Lateral forehead and temporoplasticy
Standard Foreheadplasty

- Subperiosteal to dorsum of nose
Extended Foreheadplasty

- Supraperiosteal over lateral orbital rim
- Elevates brow tail
- Decrease crow's feet
- Elevates lateral canthal raphae
Limited Foreheadplasty

- Glabellar area sub or supraperiosteal
- Lateral to supraorbital rim area
- Improves frown lines
- Increases interbrow distance
- Little effect brow tail
Lateral Forehead and Temporoplasty

- Paramedial/temporal incision
- Subperiosteal lateral to supraorbital nerve
- Inferior to superior edge of zygomatic arch
- Medially over lateral orbital rim
Procedure

- Marking, anesthesia, incision
- Blind creation of optical cavity
- **Temple dissection**
- Frontal dissection with muscle release, myotomy and/or neurotomies
- fixation
Temporal Pocket

- Temporal parietal fascia (TPF)
- Deep temporalis fascia (DTF)
- Temporal branch facial nerve
- Conjoint tendon
- Sentinel vein (zygomaticotemporal vein)
Temporal Fossa

- Temporal line of fusion (conjoint tendon)
  - Fusion of galea, periosteum, TPF, DTF
  - Separates frontal dissection from temporal dissection
1. Undersurface orbicularis oculi muscle
2. Temporal br. Facial nerve
3. Temporal parietal fascia
4. Lateral orbital rim
5. Deep temporal fascia
6. “sentinel vein” (medial zygomatic temporal vein)
7. Zygomatic arch
8. Lateral zygomatic temporal neurovascular bundle
9. Medial zygomatic temporal nerve
Procedure

• Marking, anesthesia, incision
• Blind creation of optical cavity
• Temple dissection
• Frontal dissection with muscle release, myotomy and/or neurotomies
• Fixation
Supratrochlear Nerve

- 1.6 cm from midline
- Can emerge from supraorbital notch
Right Supraorbital Area

• 1. Orbital septum
• 2. Inferior cut edge periosteum
• 3. Lateral supraorbital nerve
• 4. Undersurface periosteum
• 5. Undersurface corrugator muscle
• 6. Medial supraorbital nerve
Glabella Anatomy
Glabella Subperiosteal Dissection

• 1. Periostium
• 2. Root of nose
• 3. Inferior origin corrugator muscle
• 4. Glabella
• 5. Frontal bone
Procedure

• Marking, anesthesia, incision
• Blind creation of optical cavity
• Temple dissection
• Frontal dissection with muscle release, myotomy and/or neurotomies
• **Fixation**
Fixation Techniques

• Percutaneous temporary screws
• Permanent titanium screws
• Mitek anchors
• Lactosorb absorbable screws
• Bone tunnel
• K-wire suspension
• Occipitalis suspension
• Cable wire
• Endotine
• Fibrin Glue
Endotine Bioabsorbable

- MicroAire 1-800-722-0822
Endotine Forehead

- Two sizes based on tine height
  - Endotine 3.0
    - Female or smaller patients
  - Endotine 3.5
    - Male patients
    - Thick scalp
    - Revisions

3.0 or 3.5mm
Bone Tunnel (Medtronic 1-800-328-2518)
Bone Tunnel (Medtronic 1-800-328-2518)

- Tunnel created in outer cranial table through which suture is passed
- Anterior end of incision, periosteum and galea engaged
- Advantage
  - Ease of use
  - No palpable screw
- Disadvantage
  - Difficult technique
  - Possible diploic bleeding
Closure

- Surgical staples for scalp incisions
- 3-0 or 4-0 nylon temporal incision
  - TPF to the DTF
Cost

• Mitek
  o $199 (preloaded) per screw
• Bone bridge
  o $613
  o Reusable
• Lactosorb
  o $80/2 screws
• Endotine
  o $230
70% adherence of periosteum in 6wks
Postoperative Care

- Bandage 48hrs
- Pain medication
- Steroids
- Staples removed 7-10 days
- Sutures removed 5-7 days
THANK YOU