Forehead Procedures for the Otolaryngologist

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Forehead Surgical Topics

- Approaches
- Evaluation Pre-Surgical
- Forehead/Brow aesthetics
- Open technique directed complication avoidance
- Surgical/Anatomic Details
- Functional Indication Management
- Future

Approaches

- Coronal
- Trichophytic
- Midforehead
- Endoscopic

Otolaryngologic uses for open approach to forehead

- Frontal sinus access after endoscopic failure
- Anterior/Posterior Table frontal sinus fractures, NOE fractures, Zygomatic arch, LeFort III
- *Brow Ptosis (functional brow-lift)
- Aesthetic
- Oncologic
Preoperative Assessment: Key points

- Concurrent Blepharoplasty?
- Simulation
- Symmetry
- Brow peak

Brow position/Glabella and Perception

- Not just age/aesthetics/lines
- Role in first impressions
- Tired/Angry Appearance
- Glabella can emote sadness, fear, surprise, anger, or distress
- Can effect another’s response to us
  - Lackey JN, Norton SA AM ACAD DERMATOL2006 54(5)

Male vs. Female Brow

- T vs. Y
Brow position and Sex

Kenny Rogers

Open Approach Procedures
Coronal and Trichophtic
Relevant Frontal Branch Anatomy

- 1.5 cm supero-lateral to the brow
- Within the temporoparietal fascia
- Avoidance, not dissection

Anatomic Considerations (Hair)

- ALOPECIA AVOIDANCE
  - Bevel of incising blade
  - Cautery plane (intra-galeal)
  - Avoidance of Raney Clips
  - Flap design to include Superficial temporal vessels
  - Preserve adequate Temporal Hair in incision design
- Hairline location determines approach
  - Coronal v. Trichophytic v. Midforehead

Incision planning (Trichophytic)

Follow hairline in irregular pattern

Skin Excision Determination/Preparation

Avoid excessive excision
Local Anesthetic/Block

- Bevel in direction of hair follicles within hair bearing areas to maximize follicle preservation
- Bevel in opposite direction of hair follicles at anterior hairline to permit growth through incision for maximal disguise of incision

Hemostasis/Plane

- Meticulous hemostasis, cauterize only at the level of the galea – clips unnecessary
- Subgaleal / sliding plane dissection

Protection of the Facial Nerve

- Blunt toothed retractor
- Lateral elevation deep to the temporoparietal fascia
Corrugator (Depressor) Excision
- Corrugator excision of 1 cm to avoid re-attachment to origin
- Identify and preserve the supraorbital neurovascular bundles

Depressor Release
- Procerus excision
- Frontalis release

Keys to Successful Long-Term Results
- Tight galea closure

Tight Galeal Closure
Skin Closure

CPT/ICD-9 Coding

- CPT 67900 Repair of Brow Ptosis
  - Covers all approaches
  - Visual Field Testing Required – Taped/Untaped
- ICD-9 374.33 Mechanical ptosis
- *CPT 15824 Forehead Rhytidectomy

Outcomes
Aesthetics/Open vs. Endoscopic

- Very little objective data

Comparison Open vs. Endoscopic

- Open
  - Alopecia risk
  - Numbness risk
  - Incision length
- Endoscopic
  - EFFICACY?/Recurrence
  - Inconsistent fixation
  - Corrugator division not excision
  - Equipment Heavy
  - Less morbidity
Scores on a visual analog scale that patients used to indicate their level of pain after the procedure.

Resolution of scalp numbness.
Conclusions

• Open Forehead approach provides diverse uses
• Safe and efficacious despite reputation
• Brow aesthetics play important role in emoting, appearance
The Future: Headache Management?

- Botox use in neurology headache management
  


- Trigger site deactivation
  
  – Reduces intensity, frequency duration of HA

- Double-blind, sham surgery controlled prospective clinical trial in 75 patients

- Patients trigger sites (frontal, temporal, occipital) had botox response to migraine

- Frontal-Had excision of corrugator/procerus

- 57% sham improved 50% in HA, 84% in surgical

- 57% surgical complete resolution, 3.8% sham