Select Topics

- Blepharoplasty
- Aging Face / Rhytidectomy
- Rhinoplasty
- Facial Resurfacing
- Cleft Lip/Palate
- Hair Transplantation
Dermatochalasis: laxity and redundancy of eyelid skin secondary to aging. (OLDER PATIENTS).

Blepharochalasis: rare familial condition, young women with recurrent eyelid edema (bouts of localized angioedema, idiopathic) with skin and soft tissue laxity… levator damage and ptosis…
Blepharoplasty: Patient Eval

- **Dry eyes:** Schirmer’s test (placement of filter paper in the lateral fornix for 5 min. >15 mm normal, 10-15 mm borderline, <10 mm inadequate. Not an absolute contraindication (more conservative excision).
- **Snap Test (lower lid):** inferior pull and release. Slow return or no return without blinking, high risk for ectropion, consider canthal tightening.
- **Distraction Test (lower lid):** lid is grasped between the thumb and forefinger and pulled anteriorly (>10 mm -> lax).
Blepharoplasty

- Upper: skin pinch to measure redundancy, skin / muscle / fat excision.
- Lower: Subciliary (skin muscle flap) vs Trans-Conjunctival… Extensive dermatochalasis / orbicularis hypertrophy… Scleral show (“round eye” deformity) and ectropion with subciliary…
Blepharoplasty - Complications

- Bleeding: pain, proptosis, vision changes (severe cases). Tx: emergent canthotomy and cantholysis, return to the O.R., ophtho consult (mannitol, steroids, acetazolomide).
- Extra-ocular muscle injury: most common inferior oblique (btw medial and central fat pads)
- Ptosis: transection of weakening of aponeurosis
- Lower eyelid position: ectropion / entropion
- Dry eye syndrome: most common functional problem, exacerbated by lagophthalmos (inability to close eyes) and/or lower eyelid retraction.
Question #1

- Photo of a transconjunctival approach to lower bleph.
  Patient has pain in the eye with irritation post-op. Next step:
  - Observation
  - Fluorescein dye test
  - Lateral cantholysis
  - OR for exploration

Fluorescein Dye Test: to r/o corneal abrasion / gtts… Extreme pain/proptosis->hematoma->cantholysis / OR exploration
S/P blepharoplasty, pt develops ptosis in one eye. What is the cause?

- Levator muscle or aponeurosis injury: clinical feature: high lid crease. Diagnosis: hold the lid down and ask the patient to look up. Treatment?

  Exploration: the detached distal margin of the levator should be identified and re-attached to the tarsus
Explain the absence of lid crease in the Asian eye-lid...

Levator muscle (aponeurosis) has no connection to pretarsal skin!
Aging Face / Rhytidectomy
Anatomy - Glabella

- Procerus (vertical muscle): horizontal lines
- Corrugator (oblique / horizontal muscle): vertical lines
Anatomy - Temple

- Galea aponeurosis
- Subaponeurotic plane
- Line of fusion
- Superficial temporal fat pad
- Anterior branch of superficial temporal a.
- Temporal branch of facial n.
- Superior extension of buccal fat pad
- Zygomatic arch
- Temporalis m.
- Parotid gland
- Parotid duct
- Buccal branch of facial n.
- Masseter m.
- Mandible
Complications: Nerve Injuries

- Most common nerve injury: greater auricular (1-7%)
- Most common motor (VII) nerve injury: Temporal > Marginal (2-5%), most commonly neuropraxia secondary to traction and/or cautery
Complications

- Most common complication: hematoma (1-10%), greater in men... Pain (remove the dressing to r/o hematoma).
- Treatment: aspiration vs evacuation in the O.R. Key: prompt intervention is indicated to prevent skin flap necrosis.
- Skin necrosis: due to excessive tension on the skin flap, higher incidence in smokers, hematomas.
Complications

- Scar hypertrophy: Kenalog injections
- Earlobe traction inferiorly (pixie or satyr ear): V-Y repair
- Incisional hair loss: if permanent, consider micrografting
Question #1

- Drawing of an axon at the neuromuscular junction. Where does Botox A work?
  - Axon
  - Pre-Synaptic
  - Cleft
  - Post-Synaptic
  - Beyond

Pre-Synaptic: Prevents release of vesicles containing acetylcholine.
Temporal rhytidectomy scar with a bald patch behind it. Cause:

- Poor incision placement
- Inadequate SMAS plication
- Injury to hair follicles during incision

Hair Follicle Injury: improper beveling of the incision!
Question #3

- Most common site for skin sloughing s/p rhytidectomy:
  - Temporal
  - Pre-Auricular
  - Post-Auricular
  - Posterior Scalp

Post-auricular: distal-most portion of the face-lift flap!
Rhinoplasty

- **Tip Support Mechanisms**
  - **MAJOR**: size/shape/resilience of lower lats, medial crural attachment to caudal septal cartilage, attachment of upper lats (caudal border) to lower lats (cephalic border)
  - **MINOR**: interdomal ligament, sesamoid complex, cartilage attachment to the overlying skin/muscle, membranous septum, etc
Internal Nasal Valve

- Nasal septum, caudal margin of the upper lateral cartilage, floor of the nose/turbinate.
- Collapse usually seen following reduction rhinoplasty (dorsal hump reduction).
- Correction: spreader grafts (between the septum and upper lateral cartilages)
**External Nasal Valve**

- Nostril, alae (fibro-fatty tissue, lateral crura of the lower lateral cartilage).
- Commonly seen with aging (loss of support) or in facial paralysis.
- Correction by placement of structural grafts into the alar lobule to provide support (batten grafts)
- Batten grafts: cartilage grafts placed into a precise pocket at the point of maximal lateral wall collapse (or site of supra alar pinching)
Complications

- Rocker Deformity
- Pollybeak
- Inverted ‘V’
- Bossae
- Alar Retraction
- Saddle Nose
- Nasal Valve Collapse
Facial Resurfacing
Chemical Peels

Skin Anatomy

*not to scale

Stratum Corneum
New Skin Layer
EPIDERMIS
DERMIS
Sweat Gland
Erector Muscle
Hair Folicle
Sebaceous Gland
SUBCUTANEOUS LAYER
Fat Cells
Depth of Peels

- **Superficial**: EPIDERMIS ONLY
  - Glycolic acid, Jessner, Retin A
- **Medium**: PAPILLARY DERMIS
  - TCA (at 20, 30, or 50%)
- **Deep**: RETICULAR DERMIS
  - Phenol of varying concentrations. Key: higher concentration -> a less deep peel.

Other: systemic toxicity, cannot be used in patients with heart conditions, etc.
What agent used in a face peel is cardiotoxic:

- TCA
- Glycolic Acid
- Phenol

Phenol: deep chemo-exfoliation, cardiac arrhythmias, cardiac monitoring (?). Other complications: scarring, epidermal inclusion cysts (milia), pigmentation changes, herpetic outbreaks (prophylactic acyclovir).
Cleft Lip / Palate

- General paradigm: fix the lip until 1 year, then palate.
- Rule of 10s for the lip: >10 weeks, >10 lbs, Hgb > 10.
Cleft Lip / Palate

- 3 months: cleft lip, rip rhinoplasty, MTs
- 1 year: cleft palate repair
- 5 years: columellar lengthening
- 10 years: alveolar bone grafting and orthodontic work
- 15 years: plastics
Question #1

- 4 month old with cleft lip and palate. Surgery:
  - Alveolar bone graft
  - Cleft lip repair
  - Cleft palate repair
Hair Transplantation

- Current Technique: FOLLICULAR UNIT GRAFTING
- Follicular unit: terminal hairs surrounded by an adventitial sheath, containing sebaceous glands... allows microscopic dissection permitting excision of all excess non-hair-bearing tissue... #hairs: 1-4, most commonly 2-3.
- Technique: Micrografts (1-2 hairs) are placed along the hairline (irregular), minigrafts (3-5 hairs) for remaining areas.
Hair Transplantation

- TELOGEN EFFLUVIUM STAGE: transplanted hairs fall out in several weeks, start to regrow in 8-10 weeks...
Best way to evaluate a 35 year-old man for hair transplantation:
- Wait until 45 years of age and re-evaluate
- Wet hair
- Assess hair loss pattern of paternal grandfather
- Plan surgery based on future pattern of hair loss

Plan based on future hair loss pattern: think of class III becoming class VI…