Lid Surgery: Neoplasms, Chalazia, Ptosis, and Entropion

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Blepharoplasty

- Indications
  - Ptosis
    - Cause of Ptosis must be determined!

Ptosis

- History is key to help determine etiology
  - Congenital
  - Neurogenic
  - Myogenic
  - Aponeurotic
  - Mechanical

Neurogenic Ptosis

- Third nerve palsy
- Horner syndrome
- Marcus Gunn jaw-winking syndrome
- Third nerve misdirection

Myogenic Ptosis

- Myasthenia gravis
- Myotonic dystrophy
- Ocular myopathy
- Simple congenital

Aponeurotic Ptosis

- Involutional
- Postoperative
Mechanical Ptosis
- Dermatochalasis
- Tumours
- Oedema
- Anterior orbital lesions
- Scarring

Pseudoptosis
- Lid retraction, Hypotropia, Brow Ptosis, GPC

Pre-Op Measurements
- Measurements can help to determine type of surgery needed
  - Skin removal only
  - Skin + Levator repair
  - Brow ptosis repair

MRD
- Margin Reflex Distance
  - distance between the upper lid margin and the corneal reflection
  - In primary gaze
  - Normal around 4-4.5mm

Palpebral Fissure
- Distance between the upper and lower lid margins
  - Upper lid margin normally rests about 2mm below the upper limbus and the lower 1mm above the lower limbus
  - Less in males (7-12mm) than in females (8-12 mm)
  - Unilateral ptosis can be quantified by comparison with the contralateral side
  - Ptosis may be graded as mild (up to 2mm), moderate (3mm) and severe (4mm or more).

Levator Function
- Excursion of upper lid
  - Put 0 point of ruler at margin in downgaze
  - Then have patient look up as far as possible and measure the distance the margin moved
    - Normal =15mm or more
    - Good = 12-14mm
    - Fair = 5-11mm
    - Poor = 4mm or less
  - If lid margin can't move and did before (not congenital defect) – is now dehisced.
Upper Lid Crease

- **Pretarsal Show**
  - Distance between the lid margin and the skin fold with the eyes in the primary position, normal 8 – 12 mm

Brow Assessment

- **Palpate brow**
  - Eyebrow should be at the level of the superior orbital rim and not below. If the brow has fallen below the rim will need more advanced procedure
  - Look for wrinkles/creases on the forehead

Fatigue Test

- **To rule out MG**
- Patient look up for 30 secs or
- Patient look up and down or
- Squeeze eyes shut and try not to allow them to be forcibly opened
- Re-measure palpebral fissure – if lowers by 2 mm considered significant

Visual Field Testing

- **Tangent screen**
- Taped and untaped
- Superior only
- Carriers vary
  - Example – defect of superior must be within 15 degrees of fixation and relieved with taping

Blepharoplasty Technique Overview

- **Concerns**
  - Blood thinners
  - Clear up blepharitis first!
  - Can patient lay flat for 45 min?
  - Get pre-op photos

Entropion

- Inward turn of eyelid – usually lower lid
- For mild entropion, repair by suture is a viable option
Malignant Tumors of the Eyelids

“Pearls”
- Most periocular tumors are derived from epidermis or adnexae
- Main goal – rule out malignancy
- Identify characteristics of malignancy (HABCDs)
- BIOPSY ALL SUSPICIOUS LESIONS!

Characteristics of Epithelial Malignancies
- Ulceration – benign lesions do not ulcerate
- Induration – malignant lesions often very firm
- Irregularity – malignancies have irregular shapes and borders
Characteristics of Epithelial Malignancies

- Tenderness – malignant lesions are not painful
- Telangectasias – focal telangectasia suggests malignancy
- Pearly borders, rolled, translucent margins – think basal cell CA

Epithelial Malignancies

- Basal cell carcinoma
  - Most common malignancy of the eyelid (90%+)
  - Types
    - Nodular
    - Ulcerative
    - Sclerosing, morpheaform

Basal Cell Carcinoma

- Rarely metastasize
  - Medial canthal area most dangerous
  - Mortality rate unknown, quoted 1-3%
  - Orbital invasion
    - Iowa series (1992) 1.7%
    - Mayo clinic series 2.4%
    - Extenteration necessary 1.4 – 3.8% of cases
Epithelial Malignancies

- Squamous cell carcinoma
  - Relatively rare, Wilmer series 4.2% (Doxanas 1987)
  - Small tendency to metastasize (0.23 – 0.25%)
  - Frequently misdiagnosed clinically

Squamous Cell Carcinoma

- Confused with:
  - Sebaceous cell carcinoma, basal cell carcinoma
  - Seborrheic keratosis, inverted follicular keratosis, papilloma
  - If rapid onset and inflammation present, think of:
    - Keratoacanthoma, pseudoephitheliomatous hyperplasia
Characteristics of Pigment Cell Malignancy (Melanoma)

- New onset or recent change
- Asymmetric shape
- Irregular margins
- Color change or multiple colors
- Large size - > 5mm

Pigmented Lesions: Melanoma

MALIGNANT MELANOMA
Differential Diagnosis

- Verruca
- Molluscum
- Basal cell carcinoma
- Squamous cell carcinoma

Pick your lesion carefully!

- Chalazion
- Molluscum
- Verruca

Pick your lesion carefully!

- Squamous Cell Carcinoma
- Basal Cell Carcinoma

Pick your lesion carefully!

Biopsy Techniques

- Shave Biopsy
- Excisional Biopsy
Excision Mechanism Options
- Excision with Scalpel
- Excision with Scissors
- Excision with Radiofrequency

Papilloma Removal
- Indications
- Risks and complications
  - Recurrence
  - Scarring
  - Infection
  - Risks associated with injection of anesthetic

Excision with Scalpel

Excision Techniques

Excision Techniques
Excision Techniques

If excising lesion try to put incision in same direction as natural skin lines.

Excision with Radiofrequency

- Advantages of Radiosurgery
  - Quick and easy (to do and to learn)
  - Nearly bloodless field
  - Minimal Post-op pain
  - Rapid healing
  - Fine control with variety of tips
  - No muscle contractions or nerve stimulation from radiowaves (Faraday effects)

Papilloma Removal

Contraindications

- Do NOT perform shave excision on pigmented lesion unless certain is not melanoma!!!
- Don’t use in presence of flammable fumes/liquids
- Pacemaker
  - "Do not work near the heart and place the antenna (or grounding) plate well away from the heart. Use the least power possible. Activate the handpiece intermittently rather than continuously. The cutting mode is the most risky, so avoid it if possible. Use another form of treatment if it is an option. The pacers are purportedly "shielded" and the current in the ESUs should not affect them, but all things are not perfect. Therefore caution is needed. Asystole and tachycardia are potential adverse outcomes."

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*Pfenninger and Fowler's Procedures for Primary Care, 3rd Edition. John L. Pfenninger, MD, FAAFP and Grant C. Fowler, MD*
Electromagnetic Spectrum

Ellman Unit

Excision Techniques

Feathering Technique

Instruments

Derma-Cauter-All

Yeager Plate
**Asepsis**

- Sterile equipment
- Scrub hands
- Sterile gloves

**Bloodborne Pathogens**

- Universal Precautions:
  - Do not recap contaminated needles
  - Needle stick safety
  - Needle stick policy
  - You will have to be aware of these things if doing procedures in your office

**Informed Consent**

- Indications for treatment
- Description of treatment in layman’s terms
- Alternatives to treatment
- Risks and benefit of treatment
- Expected and unexpected outcomes
- Patient must request procedure

**Pre-Operative Activities**

- Check patient allergies
- Check vital signs (pulse, respiration, BP)
- Informed consent
- Handling patient fear
- Set up equipment
- Inspection of equipment
- Inspection of medication - discard if cloudy, expired, or container damaged
- Photodocument lesion

**Procedure Technique**

- Pre-op (photos, consent, BP and Pulse, VA)
- Anesthetize (infiltrative usually)
- Clean area, drape if needed
  - Betadine needs 3 mins on skin!
- Turn on Ellman unit: warm up for at least 30 seconds
- Choose appropriate waveform
- Choose initial power setting (will often need to adjust depending on tissue response to energy level chosen)
Procedure Technique

- Have assistant turn on/position vacuum unit – USE vacuum and masks!
  - Have isolated HPV and HIV in smoke
- Place yourself in comfortable/stable position to do procedure
- Brace your handpiece wrist on patient for stability

Procedure Technique

- Electrode tip should be applied perpendicularly to allow even distribution of energy
- Press footplate activator when ready to begin procedure
- Move in expeditious but controlled fashion: always keep electrode moving when contacting tissue

Procedure Technique

- Keep surgical site moist (saline gauze) to avoid tissue drag; also wipe energized tip to remove tissue stuck to it
- For removing mass lesions, use loop electrode/grab with opposite hand forceps/have specimen jar ready for lab submission
- When feathering down a lesion with a loop, keep perpendicular—remove until healthy tissue seen (particularly helpful with lesions on gray line)
- Can use forceps closed tips to touch end of area of bleeding, touch electrode to forceps to transfer energy to area to stop bleeding

Procedure Technique

- Clean area of betadine
- Apply antibiotic ung
- Don’t let patient jump and run as you sit them up!
- Blood pressure and pulse post-op
- Write op report in chart along with patient instructions on wound care and follow-up schedule

Chalazion Presentation

- Patient complaints
  - Non-tender lesion (may have started as a tender lesion)
  - Size varies
  - Length of time present varies
  - Location varies

Chalazion Presentation

- Exam Signs
  - Lesion within tarsus – not easily moveable
  - No lash loss
  - Non-tender, no discharge upon palpation

www.redatlas.com
Differential Diagnosis

- Hordeolum
  - Tender
  - May have discharge

- Sebaceous Gland Carcinoma
  - Must r/o in any recurrent chalazion
  - May be lash loss
  - Appearance can be varied – be cautious

Chalazia Management Options

- Give each patient all options for treatment!
  - Conservative Approach
    - Hot compress with digital massage
    - Can add Doxycycline if not contraindicated
    - Intralesional Steroid Injection
    - Incision and Curettage

Conservative Approach

- Indications
  - Small lesion (< 6 mm)
  - Less present less than 6 months
  - Lesion in medical aspect of lid where would not want to perform I & C
  - Patient choice of treatment
- Contraindications
  - Doxycycline allergy, liver and/or kidney dz
- Risks and Complications
  - No resolution of lesion

Intralesional Steroid Injection

- Indications
  - Over 6 months old
  - Large (4 - 6 + mm)
  - Located in medial aspect of lid (won’t be able to do I & C)
  - Patient choice
- Contraindications
  - Allergy/sensitivity to steroid
- Risks and Complications
  - Depigmentation
  - Infection
  - No resolution of lesion
Intralesional Steroid Injection Technique

- Multiuse Vial
  - Alcohol top
  - Put air in syringe
  - Push air into vial
  - Load syringe with med
  - Alcohol top of vial
  - Dilute kenalog 40 to 20 or 10

Instruments

- Chalazion Clamp
- Curette

Intralesional Steroid Injection Technique

Indications
- Same as for injection plus:
  - Failure of injection to resolve lesion

Contraindications
- Allergy/Sensitivity to anesthetic

Risks and Complications
- Incomplete removal
- Infection
- Risks associated with injection of anesthetic
- If recurs in same spot will need biopsy could be sebaceous gland carcinoma!
Chalazion Incision and Curettage

Chalazion Incision and Curettage

Chalazion Incision and Curettage

Chalazion Video
**Patient Education**

- May be small amount of bruising
  - Can use ice pack if needed
- Pain Relief
  - Use same meds used to alleviate headache
- Keep area clean and dry
  - Don’t wash for 24 hrs
  - No make up, lotions, powders for 5 – 7 days
- Use medication as directed
  - Usually topical antibiotic ung
  - Thin film over area for 4 – 5 days
    - Keep moist – don’t want hard dry scabs

**Immediate Post-Op Care**

- Wound Healing
- Medications
  - Antibiotic ung
  - OTC pain meds
- Ice Packs
- Follow-up schedule
- Suture Removal Technique

**Long Term Post-Op Care**

- Watch for signs of infection
- As scab forms, don’t rub, scrub or pick – keep moist. Don’t use agents that will dry it - alcohol, peroxide, etc.
- Discuss suture removal timeline
- Limit exposure to sunlight
- Long term moisturizer use (with spf)

**Coding for Minor Surgery**

- Approximate Allowables:
  - 67840 $247.90 Total Exc lid lesion
  - 67810 $196.92 Biopsy/Part Exc lid lesion
  - 11200 $78.56 Removal <16 skin tags
  - 11310 $78.42 Shave Exc <= .5 cm
  - 11900 $52.02 Chal injection
  - 67800 $115.43 Chal I & C
  - 67801 $148.92 Chal Mult S Lid
  - 67805 $184.80 Chal Mult D Lid
  - XXXXX Repair of entropion, suture

**Websites for Lesions or Diseases**

- [www.rootatlas.com](http://www.rootatlas.com)
- [www.redatlas.org](http://www.redatlas.org)
- [www.kellogg.umich.edu/theeyeshaveit/index.html](http://www.kellogg.umich.edu/theeyeshaveit/index.html)
- [www.atlasophthalmology.com/](http://www.atlasophthalmology.com/)
- [dro.hs.columbia.edu/](http://dro.hs.columbia.edu/)
- [www.gonioscopy.org](http://www.gonioscopy.org)