Medical & Surgical Treatment of Chalazia

Aaron McNulty, OD, FAAO
Louisville Eye Center
Louisville, KY

Disclosure statement

- Nothing to disclose

Outline

- Chalazion overview
  - Pathophysiology
  - Signs/symptoms
  - Differential diagnosis
- Treatment approaches
  - Risks, benefits, indications, contraindications, complications
  - Techniques
- Video examples

Chalazion Pathophysiology

- Obstructed meibomian gland retains sebaceous secretions
- May rupture and release lipid into surrounding tissue, causing granulomatous inflammation
- Risk factors: Rosacea, blepharitis (meibomitis)
  - Often previous episodes (but beware of same location!)

Chalazion Signs & Symptoms

- Non-tender, firm lesion
- Varying size
- Time since onset varies
- Generally contained within the tarsus
  - Not easily moveable
- No discharge with palpation
- No lash loss

www.redatlas.com

Differential Diagnosis

- Hordeolum
- Sebaceous Gland Carcinoma
- Basal Cell Carcinoma
- Squamous Cell Carcinoma
- Molluscum
- Epithelial inclusion cyst

Differential Diagnosis

- Hordeolum
  - Commonly staph aureus
  - Inflamed, tender
  - May have adjacent cellulitis
  - May form chalazion after acute infectious phase resolves
    - Discuss in anticipation?

Differential Diagnosis

- Sebaceous Gland Carcinoma
  - Must be considered in cases of recurrent chalazia
  - Strong tendency to metastasize
  - Presentations are variable
    - Lash loss

Differential Diagnosis

- Sebaceous Gland Carcinoma
  - Variable presentations
  - Be cautious!

Differential Diagnosis

- Sebaceous Gland Carcinoma

Differential Diagnosis

- Basal Cell Carcinoma
  - 90% of eyelid malignancies
    - Most commonly lower lid
  - Ulcerated with raised, pearly borders
  - Lash loss
  - Rarely metastatic

Differential Diagnosis

- Squamous Cell Carcinoma
  - 2nd–3rd most common eyelid malignancy (~5%)
  - Variable presentations
    - Difficult to diagnose clinically
    - Nodular
    - Irregular rolled edges
    - Central ulceration

Differential Diagnosis

- Molluscum Contagiosum
  - Waxy, nodular appearance
  - Central umbilication
  - Viral cause

Differential Diagnosis

- Epidermal Inclusion Cyst
  - Benign
  - Filled with keratin
  - Excised and expressed
  - Removal of intact cyst wall minimizes recurrence rate

Examination and History

- Detailed history of chalazion
  - Onset, growth, bleeding, **previous episodes**, itch, pain, history of cancer
- Photodocument
- Sign informed consent
  - Risks, benefits, alternatives
- Blood pressure/pulse
- Visual acuity
- Allergies?

Chalazion Treatment Options

- Medical (“Conservative”) therapy
- Intralesional steroid injection
- Incision & Curettage

- Important to educate the patient on every option

Medical Therapy

- Specific approaches vary
  - Warm compresses
  - Lid Scrubs
  - Doxycycline
  - Topical antibiotic/steroid
- Success rate?
  - Literature varies
  - Variation in practitioner preferences
  - Likely 50–75% effective

Medical Therapy

- Indications
  - Frequently first line of treatment
  - Smaller chalazia
  - Recent onset
  - Located near punctum
- Contraindications?
  - If doxycycline is contraindicated
- Risks and Complications
  - Treatment failure
  - Drug hypersensitivity

Intralesional Steroid Injection

- Injection of triamcinolone acetonide (Kenalog) directly into the chalazion
- Success rate 75–90%
  - Average resolution 2–4 weeks
- May require two injections (~25%)
  - Generally separated by 2–6 weeks

Intralesional Steroid Injection

- Indications
  - Failure of conservative treatment
  - Located near punctum
  - Located at lid margin
  - Smaller lesions
  - Less chronic lesions
  - Multiple lesions on same lid
- Contraindications
  - Allergy/sensitivity to steroid
  - Darkly pigmented skin?

Intralesional Steroid Injection

- Risks and Complications
  - Depigmentation
  - Infection
  - Bleeding
  - Bruising
  - Allergic reaction to medicine
  - No resolution of lesion (2 injections?)
  - Alters histology
    - Avoid injecting atypical chalazia!
  - Local fat atrophy
  - Vision loss

Intralesional Steroid Injection

- Alcohol cap before and after drawing up
- Inject air into vial (vacuum)
- Draw up with 18G before changing to smaller needle
- 10–40 mg/ml

Intralesional Steroid Injection

- Topical anesthetic
- Evert the lid
- +/– Clamp
- 25 or 27 gauge needle
- Make sure you're not in a blood vessel
- Aim away from globe
  - Stabilize hand on patient's head
- Inject 4 mg (up to 8 mg) of triamcinolone acetonide
  - 0.2–0.4 mL of 20 mg/mL

Intralesional Steroid Injection

- Pressure with gauze for 2–3 minutes if bloody tears
- Antibiotic drop in-office
- Rx antibiotic?
- Resume warm compresses BID in 2–3 days
- RTC 2–4 weeks

Chalazion Incision and Curettage

- Surgically incise and drain chalazion
- Often attempted after conservative measures
- Effective when medical treatment/ steroid injection are not

Chalazion Incision and Curettage

- Indications
  - Particularly large (>6mm) or chronic (>8 months)
  - Failure of more conservative therapies

- Contraindications
  - Allergy/Sensitivity to anesthetic
  - Unable to hold still
  - Medial aspect, near punctum

Incision and Curettage

- Risks and Complications
  - Incomplete removal
  - Infection
  - Allergy to anesthetic
  - Recurrence
  - Scarring
  - Lid notching
  - Permanent gland damage

Incision and Curettage

- Topical anesthetic OU
- Betadine for 3 minutes or alcohol swab
- Dot the external surface
- Inject 0.3–0.5 cc 1% lidocaine/epinephrine 1:200,000 *adjacent* to chalazion
  - Digital massage to spread anesthesia.
- Clamp (smallest possible)
  - Tight enough to prevent slippage
  - Ask about discomfort

Incision and Curettage

- Vertical incision
  - Cut away from the globe
  - Stop 2–3 mm from lid margin
  - Feather blade vs Ellman
- Remove capsular contents with curette
- May excise fibrotic capsule with forceps and scissors
- +/– intralesional steroid
- Pressure for 3 minutes to achieve hemostasis
- Palpate to ensure complete removal
- Saline rinse and erythromycin on CTA

Chalazion Incision and Curettage

- Postop instructions:
  - Antibiotic ointment +/– steroid x 4–7 days
    - Erythromycin or Tobradex ung BID
  - Resume warm compresses in 2 days
  - Pressure dressing?
  - RTC 1–4 weeks

Equipment List

- Intralesional Steroid
  - Kenalog 10–40 mg/mL
  - 1–3cc syringe
  - 27 gauge needle (0.5 inch length)
  - Topical anesthetic
  - Sharps container

Equipment List

- Incision & Curettage
  - 1-3cc syringe
  - 27 gauge or 30 gauge needle (0.5 inch length)
  - Chalazion clamp
  - Feather blade scalpel or Ellman unit
  - Curette
  - 1% Lidocaine with/without epinephrine 1:200,000
  - 4% topical lidocaine
  - Jaeger plate (optional)
  - Sterile gauze 4"x4"
  - Cotton tipped applicators
  - Erythromycin ung
  - Betadine swabs or alcohol pads

Sample Chart Entry

- Area cleaned with alcohol pad, anesthetized with 0.2cc 1% lidocaine w/ epi, clamp secured, feather blade used to incise chalazion, curette used to remove contents. Hemostasis achieved. Procedure completed w/o incident, pt tolerated procedure well. Erythromycin ung applied to eye, pt left in NAD. Rx erythromycin ung TID x 1 week, RTC 1 wk.

Video Cases

Questions?

- Thank you!
- mcnulty.aaron@gmail.com