Medical and Surgical Eyelid Problems

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Disclaimers

• I developed the course material and information independently.
• No relevant financial relationship exists by anyone in control of the content.

Outline

1. Eyelid Anatomy and Changes with age
2. Eyelid Inflammation, Styes
3. Common Lesions: Benign and Malignant
4. Management Options, Biopsy Types
5. Eyelid Malpositions
6. Ptosis and Dermatochalasis, Brow Plastics
7. Entropion, Ectropion
8. Lagophthalmos and 3rd CN palsy
9. Tramontoal myokymia
10. Blepharospasm
11. DDx Slides
Eyelid Anatomy

- Lid Crease
- Fornices
- Fissures
- Tarsus

- 2 lamellae - anterior (skin and orbicularis) and posterior (tarsus and conjunctival)

- Muscles - Retractors and Protractors

- Tendons - Lacrimal and Medial Canthal

Eyelid Muscles

Retractors:
- Levator m.
- 3rd nerve function
- Müller’s m.
- Sympathetic Function

Protractors:
- Cranial Nerve VII function
- Inferior Tarsal Muscle

Things to Note
- Lid Apposition to Globe
- Position of Lid Margins
- MRD = 3-5 mm
- Canthal Insertions
- Brow Positions
Ptosis
Usually age related levator dehiscence, but sometimes a sign of neurologic, mechanical orbital or inflammatory disease

Blepharospasm
Sign of External Irritation or Neurologic Disease

Eyelid Edema with Inflammatory Signs
Fullness, Loss of lid crease, Erythema, phtosis
What should you think of?
Differential Diagnosis (DDx)
First Consider Underlying Orbital Disease

Orbital Cellulitis, Pseudotumor, Wegener’s
Graves Ophthalmopathy, Orbital Varix
Orbital Tumors that can mimic inflammatory process:
- Lacrimal Gland CA,
- Lymphoma,
- Lymphangioma, etc.

Lacrimal Gland – Dacryoadenitis

Orbital Signs

When eyelid edema might be the tip of iceberg

Proposis
Chemosis
Poor Motility
Poor Vision
Pupil abnormality
- e.g. RAPD

Orbital Pseudotumor

Case of Chronic Eyelid Swelling/Erythema

Orbital Pseudotumor
**Pre-Septal Cellulitis**
- Good Vision
- Good Motility
- No Chemosis
- PERRL w/o RAPD

**Lacrimal Dacryocystitis**

**Some more relatively benign conditions**
- Conjunctivitis
- Hordeola
- Allergic
- Molluscum
“Styes”
Hordeolum, Chalazia and Pyogenic Granuloma

- Often in association with Blepharitis and Obstruction of Sebaceous glands
- **Hordeolum** — Acute / Infectious (e.g. staph) → Cellulitis
- **Chalazion** — Chronic / → Lipogranulomatous Inflammation
- **Pyogenic Granuloma** → Granulation tissue response

Chalazia and Hordeola

Sign of underlying meibomian gland / sebaceous gland dysfunction / Blepharitis

Hordeolum

Acute Inflammation of glands:
- Meibomian → Internal
- Hair Follicles, Zeis or Moll Glands → External
Hordeolum

“Point”

Drain through Meibomian orifice

Eyelid Abscess
Some confusion with Hordeolum

Incision and Drainage if not resolve on medical therapy

Chalazia

External

Internal
Reactive Hemangioma, with granulation tissue, proliferating capillaries. Response to trauma, irritation, surgery, suture, underlying Chalazion.

RX: Topical Steroid ung, Excision, now even Timolol reportedly of help. 


**Pyogenic Granuloma**
(Lobular Capillary Hemangioma)

Reactive Hemangioma, with granulation tissue, proliferating capillaries. Response to trauma, irritation, surgery, suture, underlying Chalazion.

RX: Topical Steroid ung, Excision, now even Timolol reportedly of help. 


**Management**

- Hot Compresses
- Lid Scrubs
- Topical Drops or Ointment:
  - Erythromycin or maybe steroid (Tobradex)
- Oral Antibiotics* Doxycycline 100mg qweek for up to 26 weeks—might be useful for "Chalazion strikes*"
- Intrallesional Injection of Triamcinolone 3.0mg 10mg 100mg

  Consider before excision in some cases
- Excision **not I and DJ**
Recall signs of Malignancies:
1) lash loss
2) ulceration, bleeding
3) telangiectasias
4) irregular pigmentation
5) distortion or destruction of eyelid anatomy

Vascular:
- Hemangioma
- Cherry Angioma – Bright red
- Varix

Other:
- Kaposi’s Sarcoma
- Pyogenic Granuloma

Crater/Ulcerated Carcinomas (BCCA, SCCA, etc)
- Keratoacanthoma
- Moluscum Contagiosum

Don’t Forget:
- Chalazion, Hordeolum and their mimics (e.g. Sebaceous Cell CA)

Need to think about possible orbital involvement.
Common Benign Eyelid Lesions

- Chalazion and related lesions
- Epidermal Inclusion Cyst
- Nevus
- Papilloma
- Seborrheic Keratosis
- Apocrine Hidrocystoma
- Hemangioma
- Molluscum
- Cutaneous Horn

**Usually, do not destroy normal architecture of eyelid
Do not bleed, no hair loss**

Papilloma

Can be pigmented, can mistake them for nevi or worse

Seborrheic Keratosis (SK)

Can be pigmented, can mistake them for nevi or worse
Cutaneous Horn

Xanthelasma

What is it?

Capillary Hemangioma

Adult with small hemangioma
Epidermal inclusion cyst

Some can have bluish / blackish color
(Apocrine hidrocystoma)

Acquired often between 5-10 years old

Can be biopsied if changes noted
Eyelid Malignancies

Signs of possible malignancy
*(External)*

- Loss of lashes
- Madarosis
- Ulceration
- Bleeding
- Telangiectatic Vessels
- Chronic inflammatory signs
- Distortion on Anatomy
- Pigmentary Changes

Basal Cell Carcinoma

- Most common eyelid malignancy
- Lower Lid margin > Upper lid
- Nodular, Pearly
- Invasive, infiltrating
  Morphoeform
- Gorlin’s Syndrome
- Basal cell—nevoid syndrome
**Squamous Cell Carcinoma**

More biologically aggressive

Can arise from areas of solar damage or actinic keratosis

**Potential for metastasis**

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**Sebaceous Cell Carcinoma**

Highly Malignant and potentially lethal

Can Masquerade as
- Blepharitis, chronic inflammation
- Blepharoconjunctivitis
- Chalazia*
- Diffuse Eyelid thickening

** Conjunctival Pagetoid Spread**

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**Suspected Malignancy Management Options**

- Simple excision with permanent<sup>1</sup> e.g., borders seem clear \(\rightarrow\) ellipse, or wedge<sup>1</sup>
- Incisional Biopsy \(\rightarrow\) to make further plans

- Frozen Section Controlled Excision (e.g., uncertain of clinical extent of invasion of tumor)
- Mohs micrographic
Recruit the help of a dermatologist*

*Regarding periodic whole body exams (since other cutaneous melanomas more likely) -
remember a good doctor knows his limitations.
What do you suspect? What would you do?

- Incisional Biopsy
- Excisional Biopsy – e.g. Ellipse
- Wedge Resection
- Permanent Section
- Frozen Section
- MOHS

Epithelial Inclusion Cyst

Approaches to Excision of Suspected Malignancies
Incisional Biopsy

- Removal of small section of tumor*
- Pathology confirmation prior to committing the patient to surgical procedure:
  - Full thickness lid wedge amounts of tarsus
  - e.g. wedge
- Excision of other vital structures
  - e.g. punctum, canaliculus, lacrimal gland, tarsal plate
  - Cardial tendons (CT or MC)

Wedge Resection

Excisional Biopsy

- Suspicious for Malignancy*
- Concern for invasion**
- Lid laxity present

Sometimes can do primarily
- e.g. clear BCCA with definite borders near margin

Eyelid Malpositions

Too High or Too Low? — Lid Retraction or Ptosis
In or Out? — Entropion or Ectropion
Upper lid position

The upper eyelid margin is normally situated 1.5 mm to 2 mm below the superior limbus and 3 mm to 5 mm above the center of the cornea.

The lower eyelid margin is normally situated at the inferior limbus.

Eyelid Retraction

1. Graves / Thyroid Eye Disease
   Need referral for further evaluation
2. Orbital Disease
3. Cicatricial / Scarring
   Trauma, Post Surgical
4. Neurological Problem
5. Pseudo-retraction — contralateral Ptosis

Thyroid Eye Disease Signs

Unilateral or Bilateral Eyelid Retraction
Unilateral or Bilateral Proptosis
Lid Lag on Downgaze
EOM duction restrictions - \( IR > MR \) > SIR, LIR
Strabismus - Esotropia or Hypotropia
Lagophthalmos
Corneal Exposure
Chemosis, Injection
Drooping Upper Eyelids

Dermatochalasis of Upper Lids
Ptosis of Upper Lids
Blepharoptosis
Ptosis of the Brow
Brow Ptosis

Dermatochalasis

Without or With Upper Eyelid Ptosis

Dermatochalasis plus Ptosis

Dermatochalasis with lateral hooding and MRD 4 mm OS and 4 mm OS

Lateral Hooding

Eye Brows

Elevators—Frontalis Muscle
Depressors—Corrugator and Procerus Muscles

Brow normally located above superior orbital rim
Brow Ptosis—measure distance from mid-brow to superior orbital rim in mm.

Brow Ptosis

DDX:

Involutional (Age)
Seventh CNP
Facial Surgery or Trauma

NOTE—how brow ptosis contributes to hooding from dermatochalasis
Real Ptosis

• Congenital

• Acquired
  • Levator Dehiscence
  • Neurological
  • Mechanical
  • Orbital Disease
  • Myogenic
  • Inflammatory

Definitions

• Ptosis: More properly called blepharoptosis. A lowering of the upper eyelid so as to cause a narrowing of the palpebral fissure height and a reduction of VOTD (often defined as ≤ 2 mm)

• Dermatochalasis: Redundancy of eyelid skin (upper or lower). This redundancy is based on the position of the eyelids. This is also sometimes associated with orbital fat prolapse.

• Brow Ptosis — A lowering of the eyebrow position which can affect both the lifting of dermatochalasis and the eyelid position as well.

• Blepharoplasty: Excision of redundant eyelid skin and/or orbital fat.

• Blepharoplasty ≠ Ptosis Repair

“Ptosis Evaluation”

• Do they have real eyelid ptosis?
  • If Yes then need consider Ddx for Ptosis

• Further exam to check for Dermatochalasis and Brow Position as these are important factors in the future surgical plan

• We need to consider whether the patient needs:
  • true ptosis surgery
  • blepharoplasty
  • brow lifting
Ptosis

**Congenital Ptosis**
- Diminished lid crease
- Head tilt

**Acquired Ptosis**
- Apneumatic
  - Levator Dehiscence
  - Due to age, trauma, CE, injection
- Neurogenic
  - Meibomian gland dysfunction
- Myogenic
  - Myasthenia, COPD
- Mechanical
  - Tumor, Chalazion
  - Brow Ptosis
- Inflammatory
  - Uveitis, Sarcoidosis, Conjunctivitis, Cellulitis

**Mechanical Ptosis**
- Levator Dehiscence
- Due to age, trauma, CE, injection

**Inflammatory Ptosis**
- Uveitis, Sarcoidosis, Conjunctivitis, Cellulitis

**Neurological Ptosis**
- Third Nerve Palsy, Horner Syndrome

**Orbital Disease**
- Cellulitis, Panophthalmitis, Graves or Tumor

**Myogenic Ptosis**
- Myasthenia Gravis
  - CPOD
- Muscular Dystrophy
  - e.g. Oculopharyngeal MD, Myotonic MD
**Aponeurosis Stretching Dehiscence**

- Usually age related
- Trauma, previous ocular surgery (e.g., Cataract, Phaco) or injections (e.g., sub-Tenon's steroid)
- Often worse on downgaze: “have to lift eyelid up to read”
- Good Levator function
- Eyelid crease maybe high, or less evident

**Aponeurotic**

- Age, Senile, Involutional
  - Levator Adequacy or Fat Redundant
- Traumatic
- Chronic Inflammation
  - Herpes Zoster, Ocular Poliomyelitis, Uveitis
- Chronic Lid Edema
  - Graves Orbitopathy, Allergy, Ocular Hypertension
- Postoperative
  - Synechial Surgery, cataract extraction, sub-Tenon's injection

**Neurological**

- Third Nerve Palsy/Paresis
- Horner's Syndrome
- Migraine
- Cerebrovascular Accident
  - (rare)
  - Brainstem
  - Unilateral or Bilateral Hemispheric or Frontal Lobe Lesions
  - (Apraxia of Lid Opening)
**Myogenic**

- Myasthenia Gravis, Ocular Myasthenia
- Mitochondrial Myopathies
- CPEO, Kearns-Sayre syndrome
- Muscular Dystrophies
  - Oculopharyngeal MD*
  - Myotonic Dystrophy**

**Ptosis**

*Ptosis* can be a sign of orbital disease

**NOTE:**
Eyebrows are elevated

**Mechanical**

- Eyelid Tumor
- Orbital Tumor
- Scarring interfering with upper lid mobility
- Brow Ptosis
  - Seventh CNP
  - Trauma, Surgery, Age
Inflammatory
- Conjunctivitis
- Cellulitis
- Keratitis
- Uveitis
- Orbital Inflammatory process

Will resolve or get aponeurotic ptosis

Evaluation of Patients with Upper Lid Drooping

Dermatochalasis and Hooding - Touching UL lashes?
Brow Elevation or Ptosis
MDI = marginal reflex distance
LF = Levator Function

Pupils and Motility – +/+/+/-Horner’s syndrome, MG and Third CN Palsy

Corneal Exposure, Dryness

Visual Field Testing
30-2 or 24-2 HVF
36 Point Screening Superior Test (BLEPH VF)

Consider Neurologic and Neuromuscular problems

<table>
<thead>
<tr>
<th>Condition</th>
<th>Pupils</th>
<th>Eyelids (ptosis)</th>
<th>Motility Deficit</th>
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<tbody>
<tr>
<td>Mynasthesia Gravis</td>
<td>-</td>
<td>+/-</td>
<td>+/-</td>
</tr>
<tr>
<td>3rd Cranial Nerve Palsy</td>
<td>+/-</td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>Horner’s Syndrome</td>
<td>+</td>
<td>+</td>
<td>-</td>
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Check Pupils and Motility!
Evaluation
MRD is the distance from the upper lid margin to the corneal light reflex.

Visually significant Ptosis usually with MRD of 2mm or less depending on pupil size.

Vertical Fissure Height

Measuring Levator Function
Upgaze
Downgaze
LF = total excursion of upper lid from maximal elevation to maximal depression.
(Best to hold brow while making measurement to eliminate it’s contribution)

Levator Function

<table>
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<tr>
<th>Range</th>
<th>Good</th>
<th>Fair</th>
<th>Poor</th>
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<tr>
<td>&gt; 10 mm</td>
<td></td>
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<tr>
<td>6 – 10 mm</td>
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<td>&lt;= 5 mm</td>
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More Typical of:
- Levator Dehiscence
- Neurologic and Myogenic
- Levator Maldevelopment
Taking eyebrows, dermatochalasis, MRD, LF and Corneal status in account. …

**Surgical Options for Drooping Eyelids**

1. Blepharoplasty
2. Brow Lifting
3. Levator Advancement
4. Levator Resection
5. Sling Procedures
6. Posterior Resection Procedures

One or more of these procedures

**Entropion**

- **Senile** — Laxity, exophthalmos, chemosis, laxity of LL insertion, orbicularis oculi spasm
- **Cicatricial** — Posterior laxity, shortened fascia
- **Orbital Disease** — Graves Ophthalmopathy

**Ectropion**

- **Senile** — Laxity, laxity of lateral canthal tendon
- **Cicatricial** — Anterior lamellar scarring
- **Orbital Tumors**

Usually signs of lid laxity and age related changes. But need to think about Cicatricial processes – and sometimes even orbital disease — e.g. Orbital tumor or Graves Ophthalmopathy.
Ectropion of Lower Eyelid

- Involutional—lid laxity
- Cicatricial
- Combination of two above
- Paralytic—7th nerve
- Mechanical
- Congenital

Medial Ectropion
(Eversion of Punctum)

Ectropion repair

Depending on Mechanisms

- Lid Tightening
- Skin Grafting
- Plication of Lid Retractors
Upper Lid Ectropion?

- Congenital Ectropion
- Floppy Eyelid Syndrome
- Skin Retraction
  Result of chemical (sun)

Floppy Eyelid Syndrome

Floppy Eyelid Syndrome with his eyelid manipulation and corneal exposure problems

Procedure: UL Lid tightening:

Entropion and Trichiasis
Management of Trichiasis

- Need to first find the cause (e.g. entropion, shortened fornix, distichiasis, lash misdirection)
- Epilation
- Lash Destruction
  - Electrolysis, Cryoprobe, Follicle Excision and Cautery
- Wedge Resection
- Repair of Entropion

Lower Lid Entropion

- Involutional
- Cicatricial
- Congenital

Involuntary / Spastic Entropion

- Horizontal Lid Laxity
- Lower Lid Retractor Dehiscence Laxity
- Distichiasis, Oversteal and Stenosis

Ocular Cicatricial Pemphigoid (OCP)
Upper Lid Entropion and Trichiasis

- Mechanical—excessive Dermatochalasis
- Cicatricial—
  - Trauma, Burns
  - HZO
  - Chronic blepharo-conjunctivitis
    - p. Acne Rosacea
  - Trachoma
  - Stevens-Johnson Syndrome, SLE

(Most cases due to secondary scarring and contracture of posterior lamella)

Lagophthalmos

- Eyelid Retraction
- Seventh Nerve Palsy
- Graves Disease

Post-op UL and LL Blepharoplasty

Lagophthalmos
(poor, incomplete eyelid closure)

- Paralytic—Seventh Nerve Palsy
- Mechanical—Graves Ophthalmopathy
- Congenital—
  - Trauma
  - Burns
  - Surgery
  - Biphephalacty
  - Tumor resection
Seventh Nerve Palsy

- Lagophthalmos
- Exposure Keratopathy
- Tear Pump Dysfunction
- Brow Ptosis
- Lower Lid Ectropion

Lid Lag on Downgaze ≠ Lagophthalmos

- Graves Ophthalmopathy
- Congenital Ptosis
- Scarring – post-op

NOT USUALLY NEUROLOGIC – Exceptions:
- PSPN, Parkinson’s,
- Aberrant 3rd Nerve regeneration

Treatment Options for Cicatricial Lagophthalmos with Exposure Keratopathy

- Lubrication
- Goggles
- Punctal Occlusion
- Tarsorrhaphy

LATER
- Lid Tightening
- Skin Grafting and Reconstruction
Exposure and Epithelial Surface Problems

- What do you do when you have:

1. A corneal epithelial defect that won’t heal.
2. A cornea with chronic PSE, Epithelopathia from exposure or problems with the tear film.
3. Chronic Chemosis.

4th—attempt to address the underlying problem.

Exposure Related
- Eyelid Malpositions: Entropion, Ectropion, Lids retraction, FES
- Lagophthalmos
- Contour
- Neurotrophic (3rd nerve, avoid when also 6th nerve)
- Orbital Disease (TBD, tumors, etc.)
- Proptosis, Lagophthalmos, Chronic Chemosis

Tear Film Related
- Loss of Conjunctival Function from Inflammation, Tumor, Trauma, etc.
- goblet cells, lacrimal glands — Trauma, inflammatory disease (SDD), etc.
- Loss of Meibomian Glands — Dehydrates, Inflammatory, etc.

Other
- Fornices: Herpes, active and neurotropic Bacterial/Fungal ulcers to Rx
- Systemic inflammation, viral, neurotropic
- Recurrent Corneal Syndrome — corneal dystrophies, trauma, diabetes, SDD
- Topical Medications
- PSE
- Poor / inadequate blinking for patient with severe head trauma / CJD

Options — Medical and Surgical

1. Lubrication — artificial tears, ointments
2. Lacrimal drainage occlusion — punctal plugs
3. Bandage Contact Lens, Scleral CILs
4. Repair of any Eyelid Malpositions
5. Repair of Fornices — grafting
6. Tarsorrhaphy
7. Gundersen Flap
8. Limbal Epithelial Cell Transplantation??
Suture – 5-0 Silk

At two sites

**Temporary Tarsorrhaphy**

- One interrupted stitch = no bolster = very temporary
- Horizontal = spreads out the force
- Mattress = with bolsters = 1-2 weeks

**“Horizontal Mattress” with Bolsters**
Blepharospasm

Goal – adhesion between upper and lower tarsal plates, not just skin.

Reversible

Blepharospasm – primary or secondary?

- Medications: anticholinergics, dopamine antagonists, oral contraceptives
- 5th cranial nerve irritation: orbital or meningeal
  - Ocular: blepharitis, dry eye, keratitis, meibomia, sicca, etc.
- Benign orbicularis myokymia
- Facial Myokymia — Posterior Diencephalon
- Other CNS: Parkinson, PSE, Tardive Dyskinesia, Tourette's
- Other – Myoclonus dystrophy, Excessive Blinking
- Hemifacial Spasm — 7th
- Benign Essential Blepharospasm (BEB)
Treatment of Blepharospasm

- TREAT UNDERLYING CONDITION!!
- Systemic Medications of Little Value
  - Clonazepam
- Alleviating Maneuvers**: (JAMA Dermatol 2015;151:136–146)
- Botulinum injections
- Surgery
  - Blepharoplasty
  - Orbicularis myectomy
  - Neurosurgical decompression of VII

Botulinum Toxin

Seven Serotypes A-G
Only two Serotypes currently Used: A and B

Type A: XEOMIN®
- incobotulinumtoxin A

Type A: BOTOX®
- onabotulinumtoxin A

Type A: DYSPORT®
- abobotulinumtoxin A

Type B: MYOBLOC®
- rimabotulinumtoxin B

Differential Diagnosis Lists
Eyelid Signs

- Blepharospasm
- Ptosis
- Eyelash Problems
- Entropion and Trichiasis
- Ectropion
- Eyelid Retraction
- Lagophthalmos
- Seventh Nerve Palsy

I have no financial interests or conflicts of interest.
**First Consider**

Underlying Orbital Disease

- Orbital Cellulitis
- Pseudotumor
- Wegener's
- Graves Ophthalmopathy
- Orbital Varix

Orbital Tumors that can mimic inflammatory process:

- Lacrimal Gland CA
- Lymphoma
- Lymphangioma

**Lacrimal Gland** – Dacryoadenitis or tumor

**Sinus Mucocele**

*Cutaneous Lymphoma Without Inflammatory Appearance, consider above but also…*

**Allergic Eyelid Edema**

**Hormonal Shifts**

- Systemic Disorder – Cardiac, Renal, Hepatic, Thyroid with edema

**Graves Ophthalmopathy** – can just have lid edema w/o inflammatory appearance

**Lymphedema after trauma, surgery to lids or orbit (e.g. lymphatics in lateral canthus)**

**Traumatic Leak of CSF into upper eyelid** *(JAMA Oph 2014;312:1485)*

**Blepharochalasis**

- Not True Edema,
  - but might mimic it:
    - Dermatochalasis,
    - Hidden Eyelid or Sub-Conjunctival Mass,
    - Prolapsed Orbital Fat

**Recall signs of Malignancies**

1) lash loss
2) ulceration, bleeding
3) telangiectasias
4) irregular pigmentation
5) distortion or destruction of eyelid anatomy

**Vascular Hemangioma**

- Cherry Angioma – Bright red
- Varix

**Other:**

- Kaposi's Sarcoma,
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- Crater/Ulcerated Carcinomas (BCCA, SCCA, etc)
- Keratoacanthoma
- Moluscum Contagiosum

**Don’t Forget:**

- Chalazion,
- Hordeolum and their Mimics (e.g. Sebaceous Cell CA)

**Primary—Benign Essential Stegner (BESS)**

**Secondary Stegner**

Involvement of cranial nerves, degenerative, focal accumulations

**Frontal Lobe**

*Cerebrovascular disease or sebaceous cysts

*NOTE: Pathological huge chalazions, Pseudosclerotic flame figures

**Westphal Syndrome**

**Abnormal Facial Nerve Regeneration**

- Lesion peripheral to facial nerve in ear canal

*Orbital Hypertrophy – study can be valuable in cases, % of approach to the problem

**Facial Myokymia**

- Mass, weakness, ptosis, nystagmus

**Testicular Syndrome**

- Male, clinical weakness, painless, absent

**Sydenham's Syndrome**

**Essential Thinning**

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Ptosis

**Causes of Ptosis**

- Congenital
- Traumatic
- Neurogenic
- Myogenic
- Myasthenic
- Ocular
- Orbital
- Malignant
- Other

**Medications**

- Propranolol
- Phenylephrine
- Epinephrine
- SoluMedrol
- Steroids
- Naphazoline

**Ptosis vs. Pseudoptosis**

- Ptosis: Lid drooping, lid margin below the upper limbus
- Pseudoptosis: Lid apparently drooping due to other factors

**Eyelashes**

- **Medications**
  - Prostaglandins
  - Topical lidocaine
- **Conditions**
  - Trichiasis
  - Entropion
- **Genetic Conditions**
  - Alagiak Syndrome
  - Down Syndrome

**Lower Lid Entropion and Trichiasis**

- **Entropion**
  - Mechanical (e.g., Bell's palsy, trauma)
  - Congenital
  - Distichiasis
- **Trichiasis**
  - Mechanical (e.g., trichiasis, entropion)
  - Congenital
  - Chemical (e.g., blepharoconjunctivitis)

**Orbital Disease**

- Cystic lesions (e.g., dermoid cyst, epidermoid cyst)
- Tumors (e.g., meningioma, lymphoma)
- Infections (e.g., bacterial, viral, fungal)
- Trauma (e.g., blunt, penetrating)
- Anomalies (e.g., persistent proptosis, ptosis)

**Inflammatory Disease**

- Sarcoidosis
- Sjögren's syndrome
- Wegener's granulomatosis
- Rheumatoid arthritis
- Systemic lupus erythematosus

**Other**

- Prostaglandin-associated orbitopathy
- Chemical (e.g., blepharoconjunctivitis)
- Mechanical (e.g., entropion, trichiasis)
- Congenital (e.g., congenital ptosis)

**Summary**

- Ptosis can be a sign of underlying medical conditions.
- Treatment varies based on the cause.
- Sometimes, orbital disease can present with eyelid malpositions.
Sometimes Orbital Disease can present with eyelid malpositions

Graves Ophthalmopathy: #1 – unilateral or bilateral

- Thyroid/Adrenal
- Congenital
- Epilepsy
- Congenital Malposition of orbital floor
- Neurologic and Muscular Disease
  - Supranuclear Palsy
  - Myotonic Dystrophy
  - MG
- Post-op Upper Eyelid Procedures
- Possible Sign of Other Orbital Disease

Lagophthalmos

- Neurological
  - Seizure, Nerve Palsy
- Chemical (Scleral)
  - Trauma
  - Burns
  - Chemotherapy
  - Post-Surgery
  - Tumor resection
- Orbital Conditions
  - Proptosis, Graves Ophthalmopathy, etc., see list
  - Orbital Inflammatory or Neoplastic Processes
- Myasthenia Gravis
- Lacrimal Disorders
- Severe Exposure Keratitis

Don't Confuse with Lid Lag on Downgaze

- Congenital
  - Graves Ophthalmopathy
  - Familial Exophthalmos
  - 2nd Cog
- Neurologic and Muscular Disease
  - Supranuclear Palsy
  - Myasthenia Gravis
- Post-op Upper Eyelid Procedures
- Possible Sign of Other Orbital Disease

Exposure Keratitis

- Don't Confuse with Lid Lag on Downgaze
  - Congenital
  - Graves Ophthalmopathy
  - Familial Exophthalmos
  - 2nd Cog
  - Neurologic and Muscular Disease
  - Supranuclear Palsy
  - Myasthenia Gravis
  - MG
- Post-op Upper Eyelid Procedures
- Possible Sign of Other Orbital Disease
Bell’s Palsy is not necessarily a Bell’s Palsy!