Ocular Examination
FRONT TO BACK
LASHES/LIDS/CONJUNCTIVA
Lids and Lashes
Lashes/Eyelids

- Lashes
  - Missing
  - Misdirected
  - White
  - Debris
    - Living
    - Non-living

- Eyelids
  - Malpositions
  - Missing
  - Cysts
  - Infiltrations
  - Tumors
  - Tissue deficiency
  - Trauma
Lashes

• Debris

• Collarettes
  – Scales (staphylococcal debris) centered around the base of lashes
  – Associated with “Anterior Blepharitis”
What do you observe?????
• Pediculosis
  – The debris may move.....

– Ulcerative

nits
• Demodex
• Poliosis
  – Whitening of lashes

• Trichiasis
  – Lashes turning inward

• Madarosis
  – Loss of lashes
Eyelids

• Lid margin is about 2 mm thick
  – Anterior border has two or three rows of stiff, sensitive cilia
  – Posterior border contains orifices for the meibomian glands
• Each blink removes the existing tear film and distributes fresh tears across the exposed cornea and conjunctiva
  – “SQUEEGEE”
Congenital Eyelid Abnormalities

- Coloboma

- Epicanthic folds

A comparison of the right eye of an Asian mother (left) with the right eye of her Asian/Caucasian daughter (right).
• Ecchymosis
  – Bruising/accumulation of blood within tissue

• Entropion
  – Inversion of the lid margin

• Ectropion
  – Eversion of the lid margin
• Cicatricial ectropion
  – Scarring

• Floppy lid syndrome
  – Poor lid/globe congruity
• Lid Retraction
  – Lids pulled back from the globe
  – Proptosis

• Lagophthalmos
  – Incomplete blink
• Ptosis
  – Droopy lid
  – Sign, NOT a diagnosis

– Complete

– Congenital ptosis
  • Better assessed on down gaze
• Ptosis with facial paralysis

• Ptosis with ophthalmoplegia
• Dermatochalasis
  – Superior eyelid (skin) overhang

• Xanthelasma
• Lumps and Bumps
  – Papilloma

  – Hordeolum

  – Chalazion
• Vesicles

Primary Herpetic lesions

molluscum contagiosum
– Tumors
Normal lid margin

The eyelid margin
- Posterior edge
- Sharp
- Mucocutaneous junction
- Meibomian orifices
- Gray line (muscle of Riolan)
- Lash line
- Anterior edge
Lid Margin

- Erythema
  - Redness
- Thickening
- Telangiectasia
  - Dilated superficial

Fig. 1 Telangiectatic Vessels
• Irregular border

• Posterior lid margin staining

• Meibomian glands
Meibomian Gland Dysfunction (MGD)

• State of “openness”

Natural history of meibomitis. Meibomian gland inflammation leads first to stenosis and then closure of the meibomian gland orifice. Published courtesy of International Ophthalmology Clinics. (1994; 34:27-36)

• Quality of secretion
  – Should be clear, “oily” secretion
  – Inspissated

paste
Discharge

- None
- Serous (watery)
- Mucoid (stringy or ropey)
Discharge

• Mucopurulent

• Grossly mucopurulent
External Eyelid Disease

These are the “easy” ones

Chronic Blepharitis

Acute Ulcerative Blepharitis

Maybe not so “easy”

Contact lens intolerance

Recurrent Erosion Syndrome (RES)
Underneath a “Normal” Eyelid
Palpebral conjunctiva
• Hyperemia
Follicles

- Small, pale, discrete mounds of infiltrative cells
Papillae

- Small bump with associated vessel in center
• Pseudomembranes

• Scarring

Epidemic keratoconjunctivitis.

Arlt’s line
• Symblepharon

• Cyst
Concretions

• Small, hard yellow-whitish deposits commonly seen in the palpebral conjunctiva

• Normal part of aging

• Result of chronic inflammation or irritation
Bulbar Conjunctiva

- Erythema
  - Caused by hyperemia
  - Pattern, pattern, pattern

More Erythema close to lid margins and less as go toward limbus

interpalpebral

diffuse

Ciliary flush
Conjunctival Hyperemia vs Episcleral Hyperemia

- Episcera
  - “Above” sclera
  - Loose vascular complex between the conjunctiva and sclera within Tenon’s capsule
  - Deep plexus
  - Superficial plexus
• Episcleral hyperemia
• Petechiae
• Melanosis
  – Racial
  – Primary Acquired

• Axenfeld’s loop
• Conjunctival wrinkling
  – Ferning

• Conjunctival staining
  – Pattern, pattern, pattern
  – Type of dye

Rose bengal

NaFl

Lissamine green
• Chemosis

• Subconjunctival hemorrhage

• Retention cyst
  – Also seen in the palpebral conjunctiva
• Pinguecula

• Pterygium

• Limbal follicles
• Follicles

• Benign conjunctival tumors
• Malignant conjunctival tumors