Chapter 3
Skills 20-27

- Eyelids
- Orbit
- Lacrimal duct

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TS 20: Eyelid Functions

a) Mechanical **protection** of globe

b) Even **tear dispersion** on ocular surface

c) **Lipid secretion** - enrichment of tears

d) **Lacrimal pump** drains the tears during blinking of eyelids
Eyelids: Anatomical Landmarks

- **Anterior lamella:**
  1. Skin
  2. Orbicularis m.

- **Posterior lamella:**
  1. Tarsal plate
  2. Conjunctiva

- **Glands**
  Moll, Zeiss, Meibomius

- **Muscles**
  a. Levator palpebrae superioris
  b. Müller
  c. Lower lid retractors (ligaments & fascias)
  d. Orbicularis
Motor supply of eyelids

**Opening**

- **III** rd cranial nerve
  - Levator palpebrae m.
- Sympathetic supply
  - Müller muscle

**Closure**

- **VII** nth cranial nerve
  - Orbicularis oculi m.
TS 21: Lid position alterations

The student should be able to:

• Recognize Lagophthalmos, Ptosis, Entropion /ectropion and address their aetiology

• Describe possible sequelae of the above conditions on ocular surface and cornea

• Explain why severe unilateral ptosis necessitates surgical correction in children younger than 10y
Malpositions of eyelids

- Lagophthalmos
  - Incomplete closure of eyelids

- Ptosis
  - Droopy upper lid

- Ectropion
  - Rolling out of the lid

- Entropion
  - Rolling in of the lid
Congenital Ptosis

CAUTION !!!

- Needs surgical correction when interfering with vision in kids
- High risk for amblyopia
Ptosis: Causes

- **Myogenic**
  - i.e. Myasthenia Gr.

- **Neurogenic**
  - i.e. IIIrd palsy

- **Mechanical**
  - i.e. tumors

- **Aponeurotic**
The student should be able to...

- Describe the VZV-related ophthalmic pathology and its management

- Explain pathophysiology of ocular involvement
  - Gasserian ganglion
TS 23 : Eyelid glands

The students should …

• Recognize **stye** and explain its pathophysiology (inflammation of the base of cilia)
  
  • (Removal of involved eyelash)

• Diagnose **chalazion** and differentiate it from stye
Exophthalmometre measurements

Causes

- Orbital inflammation
- Orbital tumors
- AV shunts
- Thyroid Eye Disease

D/D of inflammatory dis.

CT/MRI
TS 25 : Thyroid Eye Disease

- **Pathogenesis**: Autoimmune disease
  
  T lymphocytes vs thyroid-presented antigens

- **Involved tissues**: Orbital fat, extraocular muscles, eyelids

  **Severity grading**
  
  1: mild lid oedema, conjunctival injection
  2: + lid retraction
  3: + ocular motility disturbances
  4: + compressive optic neuropathy
Thyroid Eye Disease

- Clinical presentation
  - Proptosis
  - Lid retraction (Dalrymple)
  - Upper lid lag (von Graefe)
  - Reduced blinking rate
  - Lid oedema
  - Conjunctival chemosis & oedema
  - Punctate keratopathy
  - Diplopia due to motility disturbances
  - Rise of intraocular pressure
TS 25: Orbital inflammations

- D/D between pre-septal & orbital cellulitis
- Preseptal cellulitis
  - Marked lid oedema
  - Mechanical ptosis
- Orbital cellulitis
  - + restriction of ocular motility
  - + globe proptosis
- Serious condition!
- Requires Hospital admission
Tear Functions

- Nourishing and oxygenation of outer corneal layers (avascular tissue)
- Maintain smoothness and homogenity of refractive corneal surface
- Chemical and mechanical protection of ocular surface (enzymatic action, wash-out)
Dry Eye - Epiphora

Dry Eye Syndrome:

- Quantitative (reduced aqueous secretion) or/and qualitative (reduced mucin or lipid composition) tears deficiency

Watery Eye:

- Excess lacrimation (increased production or/and reduced drainage)

Epiphora:

- Spill over of tears
TS 27: Tear Drainage

- Congenital nasolacrimal duct obstruction
  - Mucous discharge, epiphora
  - Massage, antibiotics until the age of 18 months
  - Nasolacrimal duct probing
# TS 27: Dacryocystitis

## Acute
- Rapid progress
- Marked oedema
- Sensitivity, pain
  - Antibiotics per os

## Chronic
- Epiphora
- Mucopurulent discharge
- Unilateral conjunctivitis
  - Dacryocystorrhinostomy
Electronic Referrals – 3rd Chapter

2. http://www.revophth.com/content/d/plastic_pointers/c/38692/
5. http://www.optometry.co.uk/uploads/articles/0e8005e0bc2e021ee066d330df17d893_skorin20020628.pdf