



DIAGNOSTIC & THERAPEUTIC APPROACHES IN OPHTHALMOLOGY

1st Department of Ophthalmology A.U.TH.

2nd Department of Ophthalmology A.U.TH.

Clinic Director: Prof. Panagiotis K Oikonomidis

Clinic Director: Prof. Stavros A. Dimitrakos



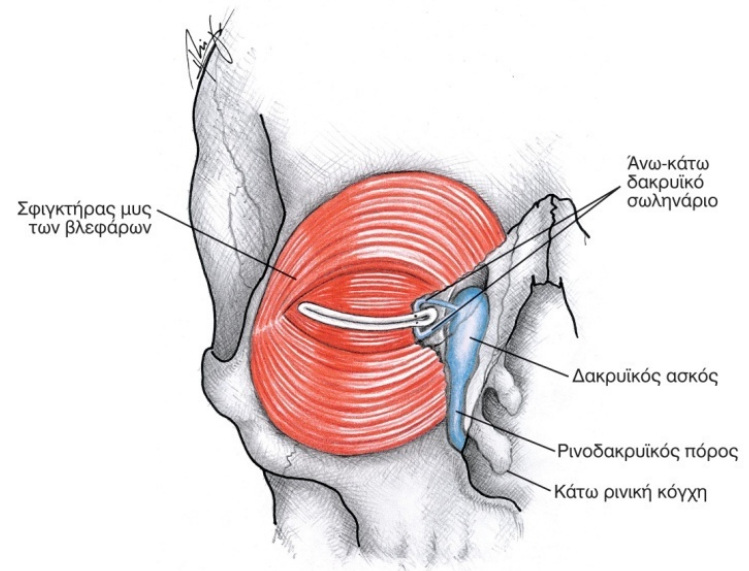
Chapter 3

Skills 20-27

- Eyelids
- Orbit
- Lacrimal duct

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:

- i. Skin
- ii. Orbicularis m.

■ Posterior lamella:

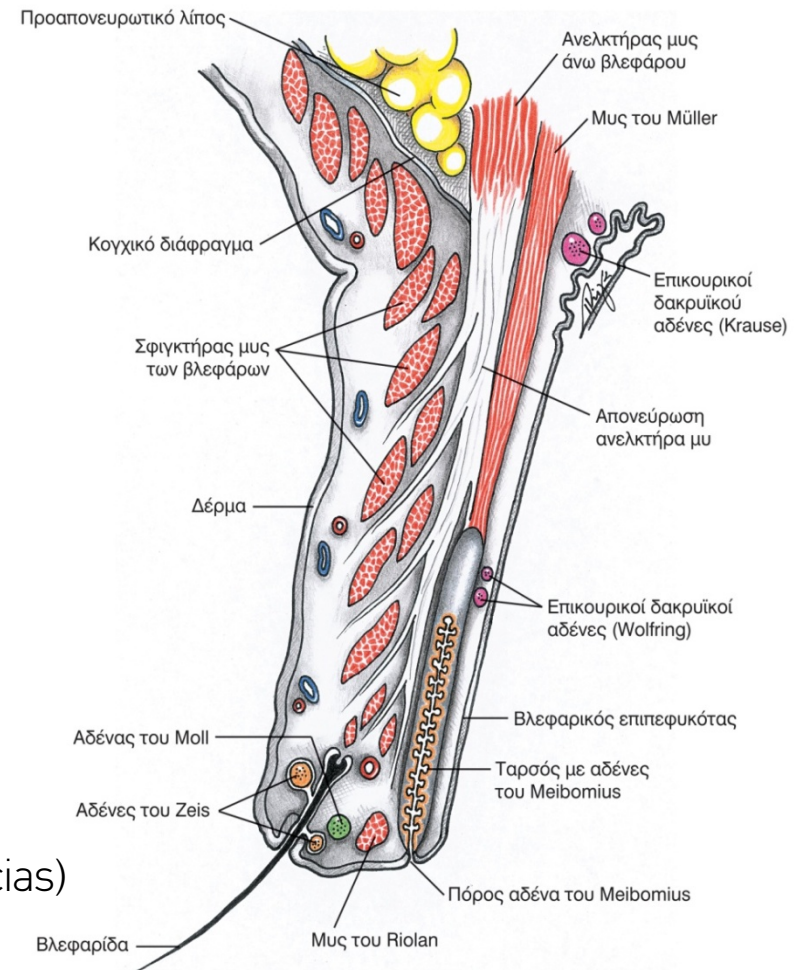
- i. Tarsal plate
- ii. Conjunctiva

● 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



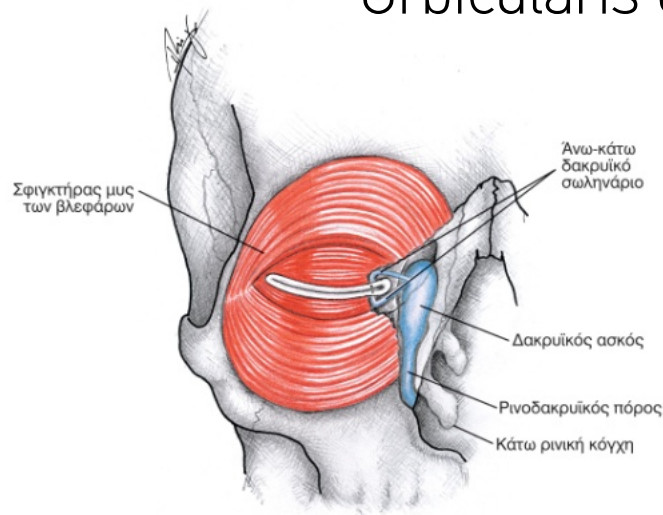
Müller muscle

Closure

- VII nth cranial nerve



Orbicularis oculi m.



TS 21 : Lid position alterations

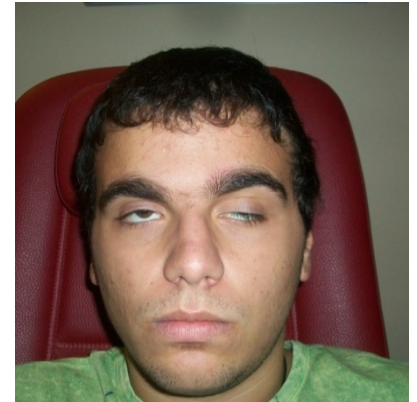
The student should be able to:

- 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. III rd palsy
- Mechanical
 - i.e. tumors
- Aponeurotic



TS 22 : Eyelid Skin

The student should be able to...

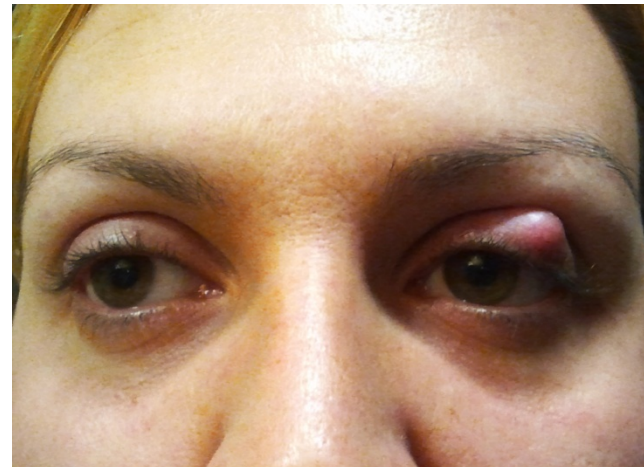
- Describe the VZV-related ophthalmic pathology and its management
- Explain pathophysiology of ocular involvement
 - Gasserian ganglion



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



TS 24 : Orbit - Exophthalmus

- 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



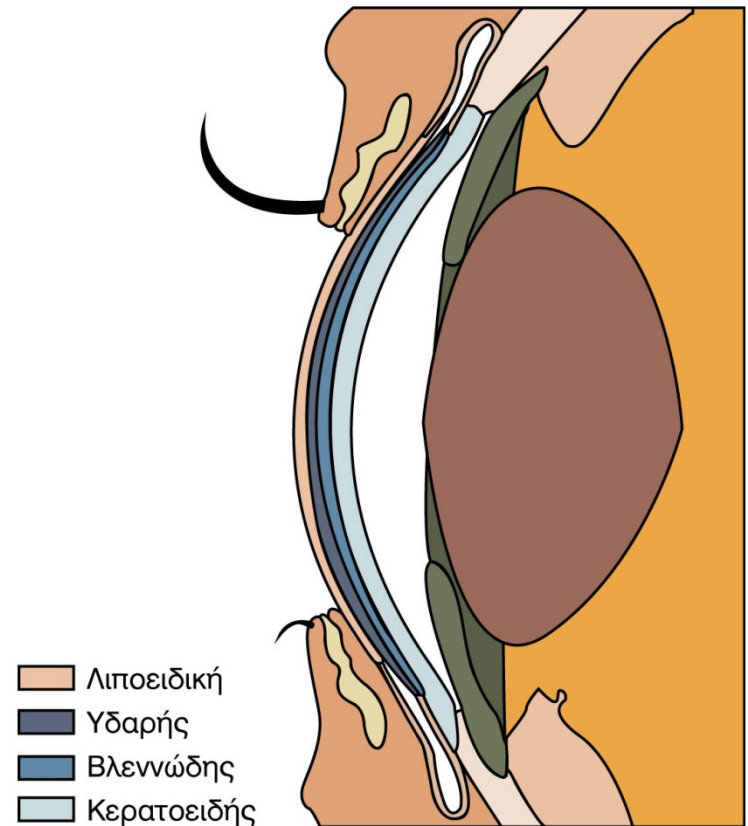
TS 25 : Orbital inflammations

- 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

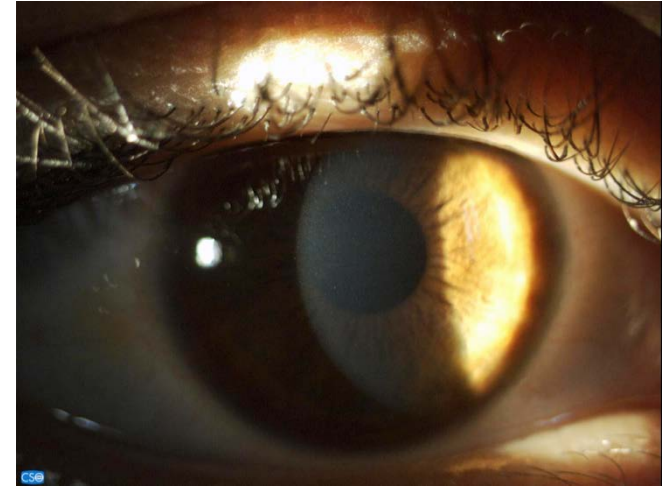
- Nourishing and oxygenation of outer corneal layers (avascular tissue)
- Maintain smoothness and homogeneity of refractive corneal surface
- Chemical and mechanical protection of ocular surface (enzymatic action , wash-out)



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

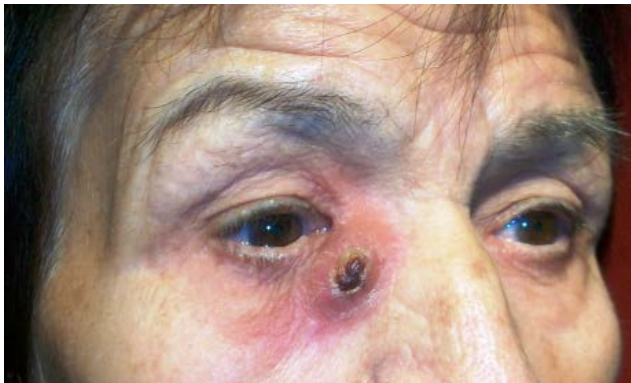
- Congenital nasolacrimal duct obstruction
 - Mucous discharge, epiphora
 - Massage, antibiotics until the age of 18 months
 - Nasolacrimal duct probing



TS 27 : Dacryocystitis

Acute

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



Chronic

- Epiphora
- Mucopurulent discharge
- Unilateral conjunctivitis
- Dacryocystorrhinostomy



Electronic Referrals – 3rd Chapter

1. <http://emedicine.medscape.com/article/834932-overview>
2. http://www.revophth.com/content/d/plastic_pointers/c/38692/
3. <http://emedicine.medscape.com/article/1212082-overview>
4. <http://www.aafp.org/afp/2002/1101/p1723.html>
5. http://www.optometry.co.uk/uploads/articles/0e8005e0bc2e021ee066d330df17d893_skorin20020628.pdf
6. <http://emedicine.medscape.com/article/1218575-overview>
7. <http://emedicine.medscape.com/article/1218444-overview>
8. <http://www.patient.co.uk/doctor/orbital-and-preseptal-cellulitis>
9. http://eyewiki.aao.org/Nasolacrimal_Duct_Obstruction,_Congenital
10. <http://emedicine.medscape.com/article/1210688-overview>