EYELID DISORDERS

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ANATOMY

The main function of the eyelids is to spread the tears and other secretions on the ocular surface to keep it moist. This is achieved by the opening and closing of the eyelids and is mediated through three muscle groups:

- Levator palpebrae superioris: elevator of the upper eyelid
- Müller's muscles: also known as superior tarsal muscle – elevator of upper eyelid
- Orbicularis oculi: closure of upper and lower lids

INNERVATION OF THE MUSCLE GROUPS

- Levator palpebrae: Superior division of the 3rd cranial nerve
- Müller's muscles: 3rd order neuron of the oculo-sympathetic pathway
- Orbicularis oculi: 7th cranial nerve

DISORDERS

- Abnormalities of eyelid opening
- Abnormalities of eyelid closure

ABNORMALITIES OF EYELID OPENING

Congenital

Acquired:

- Neurogenic
- Myogenic
- Aponeurotic
- Traumatic
- Mechanical
- Pseudoptosis

Lid retraction or excessive elevation:

- Supranuclear retraction
- Neuromuscular eyelid retraction
- Myopathic eyelid retraction
- Lid lag

ABNORMALITIES OF EYELID CLOSURE

Insufficiency of eyelid closure

Decreased blink rate

Eyelid nystagmus

Excessive eyelid closure: pathological blinking or blepharospasm

- Supranuclear cause
- Brainstem disease
- Eyelid myokymia
- Facial nerve disease
- Neuromuscular disease
- Systemic disease

PTOSIS

Ptosis is an abnormally low upper lid position. The normal lid position is 2mm below the superior limbus. The lower lid lies at the inferior limbus. Upside down ptosis refers to the elevation of the lower lid.

CONGENITAL PTOSIS

Congenital ptosis may be unilateral or bilateral. It is associated with other congenital ocular or orbital abnormalities such as Marcus Gunn jaw winking phenomenon, blepharophimosis, eyelid hamartomas, co-existent strabismus or amblyopia, congenital fibrosis of extraocular muscles and superior rectus weakness.

ACQUIRED PTOSIS

Neurogenic

Neurogenic ptosis is caused by an innervation defect.

- Cortical ptosis - unilateral or bilateral
  - temporal, occipital or frontal lesions (Lid apraxia)
  - Parkinson's disease, progressive supranuclear palsy (PSP)
  - Functional ptosis
- 3rd nerve palsies
- Horner's Syndrome
- Ophthalmoplegic migraine

Myogenic

Myogenic ptosis is caused by a myopathy of the levator muscle. It can also be caused by a transmission impairment at the neuromuscular junction of muscles. It may occur in:

- Myasthenia Gravis
- Chronic progressive external ophthalmoplegia
- Myotonic dystrophy
- Botulism
- Steroid induced ptosis: Steroid myopathy

Aponeurotic

Aponeurotic ptosis is caused by a defect in the levator aponeurosis. The ptosis is consistent in all positions of gaze. There is good levator function (>10mm). The upper lid may be thinned and almost transparent.

Traumatic

- Lid laceration
- Post surgical (Cataract surgery, orbital surgery)
- Intraorbital foreign body
- Orbital roof fracture

Mechanical

The ptosis is caused by the gravitational effect of a mass or scarring.

- Eyelid tumour
- Eyelid infiltration (e.g. Lymphoma)

- Brow or upper facial laxity and droop
- Contact lens wear

Pseudo-ptosis

This is due to a lack of lid support. It may be due to:

- Microphthalmia
- Enophthalmos
- Hypotropia
- Contralateral lid retraction

ABNORMALITY OF EYELID OPENING

Lid retraction

This may occur in the following conditions:

- Dorsal Midbrain syndrome (Collier's sign)
- Aberrant regeneration of the 3rd cranial nerve (pseudo von Graefe)
- Physiologic response to a contralateral ptosis
- Sympathomimetic drops

Lid lag

- Thyroid eye disease
- Parkinson's disease, Progressive supra-nuclear palsy (PSP), Thalamic-midbrain stroke

ABNORMALITIES OF EYELID CLOSURE

Insufficiency of eyelid closure

The eyelid may not be able to completely close due to:

- Facial palsy (Supranuclear)
- Facial nerve palsy
- Myasthenia gravis; Peek sign
- Systemic diseases; Muscular Dystrophy, Myotonic Dystrophy, Chronic progressive external ophthalmoplegia (CPEO)

Decreased blink rate

- Parkinson's disease
- Thyroid eye disease
- Progressive supranuclear palsy
- Infants in the first few months of life

Excessive eyelid closure

- Blepharospasm
- Hemifacial spasm
- Benign facial or eyelid myokymia