


1) Eyelid pathologies:

inflammation	Abnormal lid position	Lid lumps	Abnormalities of the lashes
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<b>A) Abnormal lid position</b>	
<b>1) Ptosis</b>	
<b>Causes could be:</b>	<div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <p><b><u>Mechanical</u></b></p> <ol style="list-style-type: none"> <li>1) Large lid lesion pulling the lid down (trauma/tumor like neurofibromatosis)</li> <li>2) Lid edema</li> <li>3) Tethering of the lid by conjunctival scarring</li> <li>4) Congenital abnormality of levator muscle: Levator function: reduced Eyelid crease margin: absent Unilateral or bilateral: unilateral Other clinical features: amblyopia or strabismus</li> <li>5) Structural abnormality like "aponeurotic ptosis" disinsertion of the aponeurosis of levator muscle: Levator function: normal Eyelid crease margin: increased Unilateral or bilateral: uni or bilateral Other clinical features: isolated finding of ptosis only</li> </ol> </div> <div style="width: 30%; text-align: center;">  </div> <div style="width: 30%;"> <p><b><u>Neurological</u></b></p> <ol style="list-style-type: none"> <li>1) Third nerve palsy Levator function: reduced Eyelid crease margin: normal Unilateral or bilateral: unilateral Other clinical features: mydriasis and do evaluation because it can be sus for aneurysm</li> <li>2) Horner syndrome (Sympathetic nerve lesion) Levator function: normal Eyelid crease margin: normal Unilateral or bilateral: unilateral Other clinical features: miosis</li> <li>3) Marcus gunn jaw winking syndrome</li> </ol> </div> <div style="width: 30%;"> <p><b><u>Muscular</u></b></p> <ol style="list-style-type: none"> <li>1) Myasthenia gravis Levator function: reduced Eyelid crease margin: normal Unilateral or bilateral: uni or bilateral Other clinical features: diplopia</li> <li>2) Muscular dystrophy Levator function: reduced Eyelid crease margin: normal Unilateral or bilateral: bilateral Other clinical features: orbicularis oculi or other extraocular or bulbar muscles may be affected</li> <li>3) Chronic external ophthalmoplegia</li> </ol> </div> </div>
<b>Symptoms</b>	Cosmetic effect/ vision impairment/ symptoms of underlying illness like diplopia or decreased eye movement in 3 <sup>rd</sup> nerve palsy, asymmetric pupils in horner
<b>Signs</b>	reduction of size in palpebral aperture/ the upper lid margin may partially cover the pupil/ function of the levator muscle (max distance 15-18 mm)/ elevation of eyebrows/ decreased distance between upper lid margin and light reflex: in mild ptosis 4mm, in moderate 3 mm, in severe 2 mm or less
<b>Management</b>	Treat underlying cause if known, if not known do surgical correction

<b>Abnormal lid position</b>		
	<b>2) Entropion</b>	<b>3) Ectropion</b>
	In turning of the eyelid usually the lower towards the globe occurs if patient looks down or induced by forced lid closure symptoms occur because the inturned lashes cause irritation of the eye and may abrade the cornea	Eversion of the lid away from the globe
<b>Causes</b>	<ol style="list-style-type: none"> <li>1) Weakness of orbicularis muscle as in elderly patients</li> <li>2) Conjunctival scarring drawing the lid downwards “cicatritial entropion” which can have inflammatory/infectious/traumatic or surgical causes)</li> </ol>	<ol style="list-style-type: none"> <li>1) Age related orbicularis muscle laxity</li> <li>2) Scarring of periorbital skin</li> <li>3) 7<sup>th</sup> nerve palsy</li> </ol>
		<u>symptoms:</u> epiphoria because the lid evert the puncta and prevents drain of tears/ red eye/ exposure of conjuctiva
<b>Treatment</b>	<ul style="list-style-type: none"> <li>- Short term lubricants or tapping the lid</li> <li>- Permanent surgery</li> <li>- Injection of botox in palpebral part of orbicularis oculi</li> </ul>	Surgical

**B) Inflammation**

	<b>Anterior blepharitis</b>			<b>Posterior blepharitis</b>
	Inflammation at the base of eyelashes			Inflammation of the inner portion of the eyelid, at the level of meibomian glands and often described as meibomian gland dysfunction
<b>Prevalence</b>	Less common and more likely in female and younger			More common
	variants of anterior blepharitis:			Posterior blepharitis can be associated with rosacea or seborrheic dermatitis
	<b>Staphylococcal anterior blepharitis</b>	<b>Seborrheic variant</b>	<b>Cylindrical dandruff (demodex)</b>	
	Fibrinous scales and crusts In severe disease causes: <b>marginal keratitis</b> = hypersensitivity reaction to staph exotoxins and it is unilateral, transient but recurrent	Dandruff like skin changes around the base of eyelids resulting in greasy scales around the eyelashes	mite	
<b>Signs</b>	<ul style="list-style-type: none"> <li>- Scaling and redness of the lid margin</li> <li>- Debris in the form of collarette around the eyelash</li> <li>- Reduction of number of eyelashes</li> </ul>			<ul style="list-style-type: none"> <li>- Obstructing and plugging of the meibomian orifices</li> <li>- Thickened cloudy meibomian secretion</li> <li>- Injection of the lid margin and conjunctiva</li> <li>- Tear film abnormalities</li> </ul>
<b>Clinical presentation of both</b>	Red eyes – gritty sensation – burning sensation- excessive tearing – itchy eyelids – red, swollen eyelids – crusting or matting of eyelashes in the morning – flaking or scaling of the eyelid skin – light sensitivity – blurred vision			
<b>Treatment</b>	To remove debris: cotton bud wetted with bicarbonate or diluted baby shampoo To reduce inflammation: topical steroids Staph: topical AB Demodex: tea tree oil			<ul style="list-style-type: none"> <li>- Hot bath to closed lid then lid massage</li> <li>-Topical azithromycin, oral tetracycline</li> <li>-Artificial tears</li> </ul>

### C) Lid lumps and bumps: can be benign or malignant

C) BENIGN LID LUMPS AND BUMPS							
Benign lump	1-chalazion	2- Internal hordeolum	3- External hordeolum (stye)	4- Molluscum contagiosum	5- CYSTS		
<b>Pathology and site</b>	Chronic inflammatory lesion that develops when a zeis or meibomian tear gland of the eyelid becomes obstructed	Abscess within the meibomian gland	Painful abscess of an eyelash follicle	One or multiple small, pale, shiny nodules with central umbilication	<b>Sebaceous cyst</b>	<b>Cyst of moll</b>	<b>Cyst of zeis</b>
<b>Notes</b>	Common and Painless	painful	Painful	Caused by <u>pox virus</u> and spread by direct contact or by fomites	opaque	Translucent lesion, Obstruction of sweat gland	Opaque, blockage of accessory sebaceous gland
<b>Treatment</b>	Lid swelling usually resolves within six months, if persistent -> incision and curettage of gelatinous contents	May respond to topical AB but usually incision is necessary	Removal of the associated eyelash and application of hot compresses	Molluscum <u>may resolve spontaneously within one year.</u> <u>Treatment options:</u> Simple excision/ cryotherapy and desiccation	Excision for cosmetic reasons		Excision for cosmetic reasons

BENIGN LUMPS AND BUMPS				
Benign lump	6- Squamous papilloma	7- Xanthelasma	8- keratoacanthoma	9- Naevus (mole)
<b>Pathology and site</b>	Caused by papillomavirus and presents like frond- like (skin tag) or lobular projection that contains central vascular core	Cholesterol filled plaques Usually appear on the medial aspect pf the eyelids bilaterally in middle aged and old adults	hyperkeratotic nodule with central keratin plug	Lesion derived from altered melanocytes
<b>General notes</b>	Most common benign tumor of eyelid	If a young patient has xanthelasma -> mostly lipoprotein abnormality	Rapidly growing (three to six weeks) vs typical SCC (months to years) keratoacanthoma resemble SCC histologically	Can be pigmented or not, if upper and lower eyelid = kissing nevus
<b>Treatment</b>	Simple excision or cryotherapy	Therapy only for cosmetic reasons	Spontaneously regress with scar formation	No treatment is necessary

<b>Malignant lumps and bumps</b>		
<b>Malignant lesion</b>	<b>Basal cell Carcinoma</b>	<b>Squamous cell carcinoma</b>
<b>Presentation</b>	small, slow-growing, firm, painless, pearly, and indurated.	nodules or plaques with everted edges that enlarge and often develop crusting
<b>Prevalence</b>	Most common malignant tumor of the eyelid	Less common
<b>Location</b>	mostly involve the lower eyelid margin	Lower lid with a propensity for the lid margin
<b>General notes</b>	Slow growing, locally invasive and rarely metastasize	Faster growing, can arise de novo or from preexisting actinic keratosis and is more likely to metastasize.
<b>Risk factors</b>	Fair skinned individuals History of prolonged sun exposure	
<b>Treatment</b>	Excision with a margin of normal tissue surrounding the normal lesion For large lesions: Moh's chemosurgery and excision with frozen section control  Cryotherapy Radiotherapy	The clinical diagnosis should be confirmed by incisional biopsy. Wide local surgical excision with frozen section is usually sufficient for cure

<b>D) ABNORMALITIES OF LASHES</b>	
<b>Condition</b>	<b>TRICHIASIS</b>
<b>Definition</b>	Common condition which aberrant eyelashes are directed towards the globe, where the lash rubs against the cornea and causes irritation and abrasion
<b>Causes</b>	Trachoma; especially in developing countries
<b>Treatment</b>	Epilation of the offending lashes Recurrence with cryotherapy or electrolysis Surgical correction if associated with abnormalities in lid position

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## 2) Abnormalities of lacrimal system:

Either abnormality in:

### A) Tear flow and evaporation:

- 1- Aqueous-deficient dry eye (decreased tear production)
- 2- Evaporative dry eye
  - Inadequate meibomian oil delivery
  - Malposition of the globe or lid margin
- 3- Inadequate mucus production like in cicatricial conjunctival disorders

### B) The drainage of tears

- 1- Obstruction of tear drainage
  - Infantile
  - Adults
- 2- Infection of the nasolacrimal system

**A) Disorders of Tear flow and evaporation**

	<b>Aqueous deficient dry eye</b>		<b>Evaporative dry eye</b>		<b>Inadequate mucus production</b>
<b>conditions</b>	Kerato-conjunctivitis sicca		Inadequate meibomian oil delivery (a form of posterior blepharitis)	Malposition of the globe or lid margin	Destruction of the goblet cells occurs in: 1- cicatricial conjunctival disorders like erythema multiforme which cause conjunctival shrinkage with adhesion forming bw the globe and the conjunctiva (symblepharon) and causes lid deformity and trichiasis 2- chemical burn of eye 3- trachoma 4- vit A deficiency xerophthalmia
<b>pathology</b>	Deficiency in tear quantity, composition and excessive evaporation characterized by Hyperosmolarity, ocular surface damage, inflammation and visual loss				
<b>causes</b>	<b>Sjogren syndrome</b>  -primary: autoimmune exocrinopathy resulting in dry eye, mouth and mucous membranes -secondary Sjogren syndrome: when dry eye associated with RA or autoimmune CT disorder	<b>Non-Sjogren syndrome</b> -age related: lacrimal ductal obstruction over time -conjunctival scarring like trachoma -lacrimal gland infiltration like lymphoma	-Extensive meibomian gland obstruction -Deficient tear film lipid layer -Water loss from eyes	-Ectropion -Lagophthalmos -Proptosis -Infrequent blinking	
<b>symptoms</b>	Grittiness, burning, photophobia, heaviness of the lid, ocular fatigue Symptoms worse in the evening In severe cases -> reduced visual acuity due to corneal damage				Similar to aqueous deficiency
<b>signs</b>	In mild cases -> small dots of florescence (punctate staining) in corneal and conjunctival surface In severe cases -> filamentary keratitis which is tags of abnormal mucus tin cornea causes pain with blinking				Scarred abnormal conjunctiva and area of fluorescein staining
<b>Treatment</b>	Mild cases may respond to artificial tears Severe cases are difficult to treat but can occlude the puncta with plugs or permanently with surgery Topical anti-inflammatory drugs		Temporary causes: artificial tears Injection of Botox into the levator muscle (in temporary ptosis) Permanent causes: lid margin suturing (lateral tarsorrhaphy)		Artificial lubricant

**B) disorders of tear drainage**

Pathology	Obstruction of tear drainage could be:		Infection
	Infantile	Adult	Mostly by Staph or strep
location	Nasolacrimal system: solid cord= canalize patent just before term	Occurs at any point mainly nasolac duct	
causes	-Imperforate distal end of NL duct= watering eye -canaliculi: infection=mucocoele-dacrocystitis -conjunctiva is not inflamed.	-infection -direct trauma -drugs Symptoms include watery eye with stickiness + white eye Symptoms worse in wind or cold weather	
Signs/ diagnosis	Pressure over lacrimal sac -> discharge	-stenosed punctum may be seen on slit lamp examination -If obstruction beyond the punctum diagnosis made by syringing the naso-lacrimal system with saline (into a canaliculus) -patent system if the pt tasted the saline -obstruction & regurgitation from the non-cannulated punctum -Exact location confirmed by dacroscintogram	-Close obstruction predisposes to infection -Painful swelling on the medial side of orbit (enlarge infected sac) -If Mucocele (mucous collection) =will be painless
Treatment	Spontaneous resolution in 1 <sup>st</sup> year of life or do probing-perforate the occluded membrane through nasolacrimal duct	dacryocystorhinostomy	Systemic AB DCR may be necessary to prevent recurrence