

بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ

Red eye/Blepharitis

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Scenario

- A patient of age 25 yrs come to eye opd with itching foreign body sensation watering Bt eye for last few yrs. On examination his vision is 6/6 BEs. He is also complaining of recurrent chalazian formation.
- What is the most probable diagnosis
- **A** allergic conjunctivitis
- **B** vernal conjunctivitis
- **C** anterior blepharitis
- **D** anterior uveitis



- It is the subacute/ chronic inflammation of the eye lid margins. Is a common cause of ocular discomfort and irritation in all age and ethnic groups.

While generally not sight-threatening, it can lead to permanent alterations in the eyelid margin or vision loss from superficial keratopathy, corneal neovascularization, and ulceration.

Lid margins

- Gross anatomy. ??
- Types,??

Lid margin types

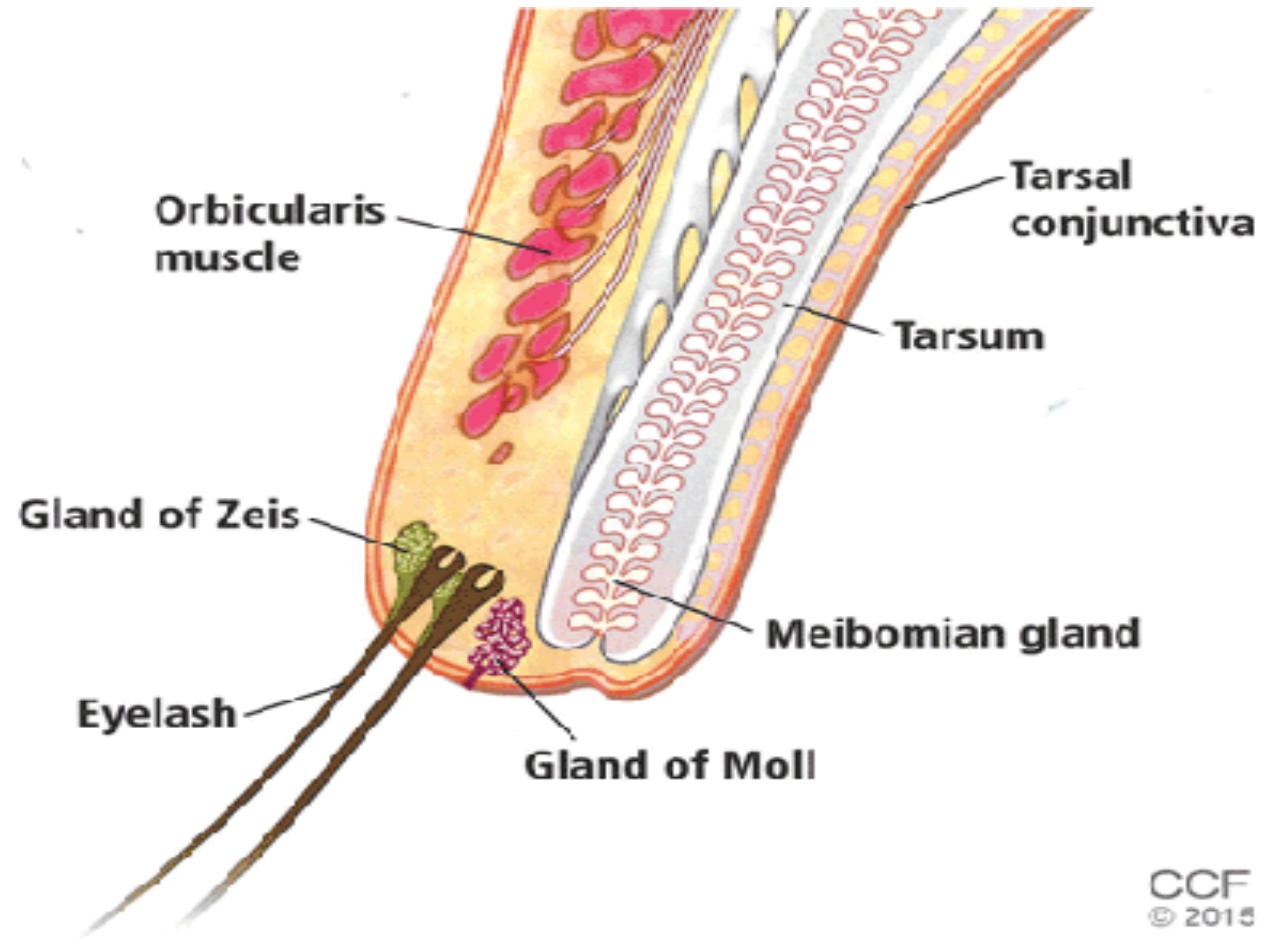


Anterior Margin

Posterior Margin

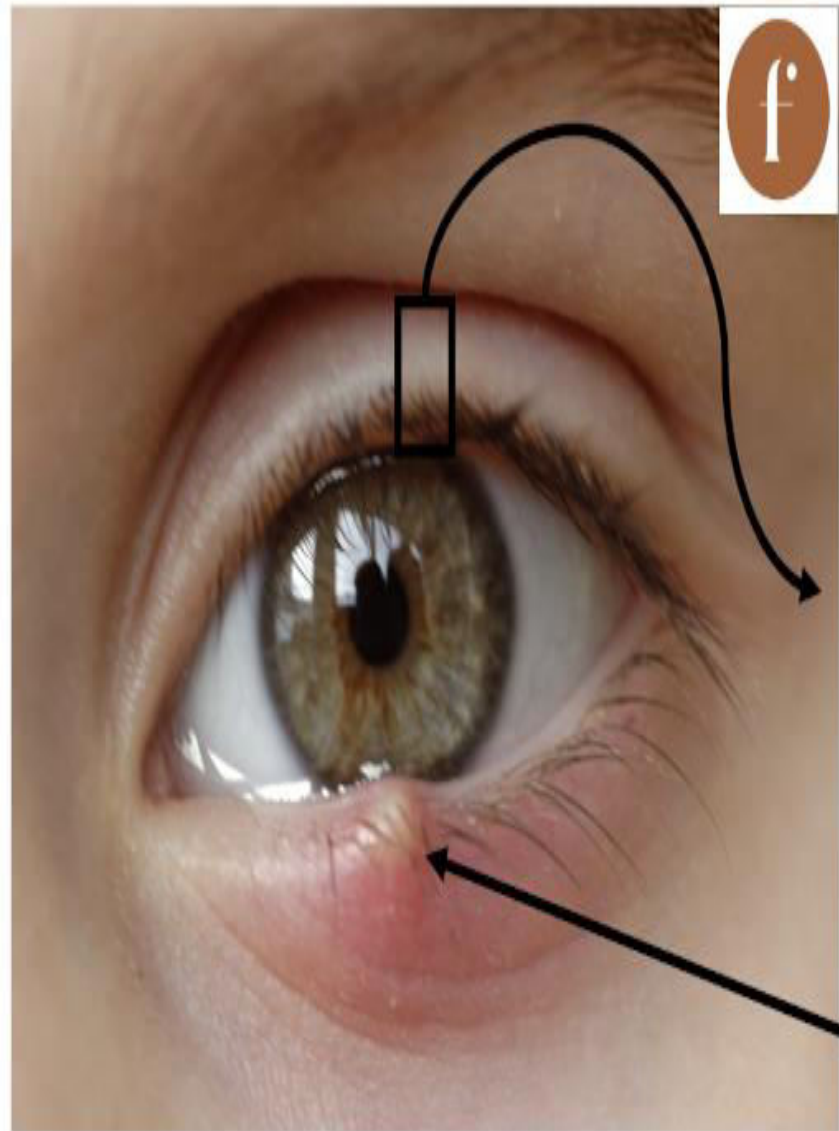
Hordeolum an acute abscess within an eyelid gland, usually staphylococcal in origin

- When it involves a
- meibomian gland
- it is termed an
- *internal hordeolum*,
- and when it involves
- the gland of Zeis or
- Moll it is termed an
- *external hordeolum*

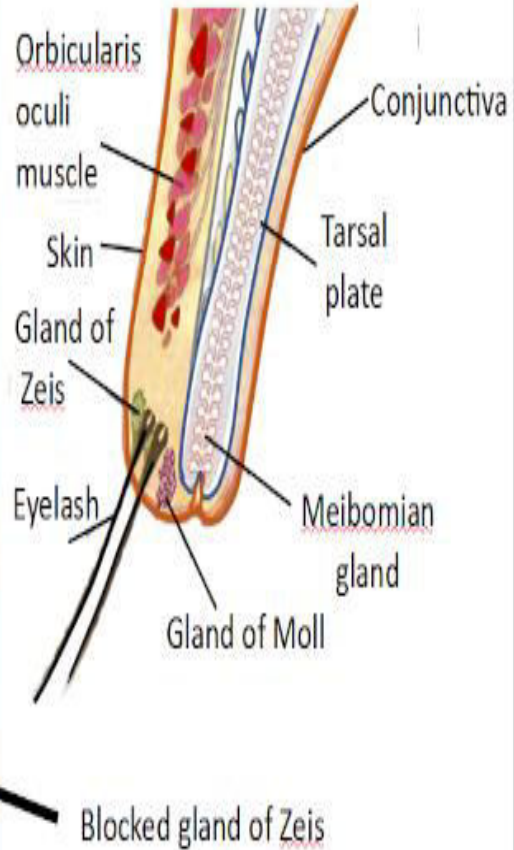


Chalazion

- A is a chronic
- lipogranuloma
- due to leakage of
- sebum from an
- obstructed
- meibomian gland.



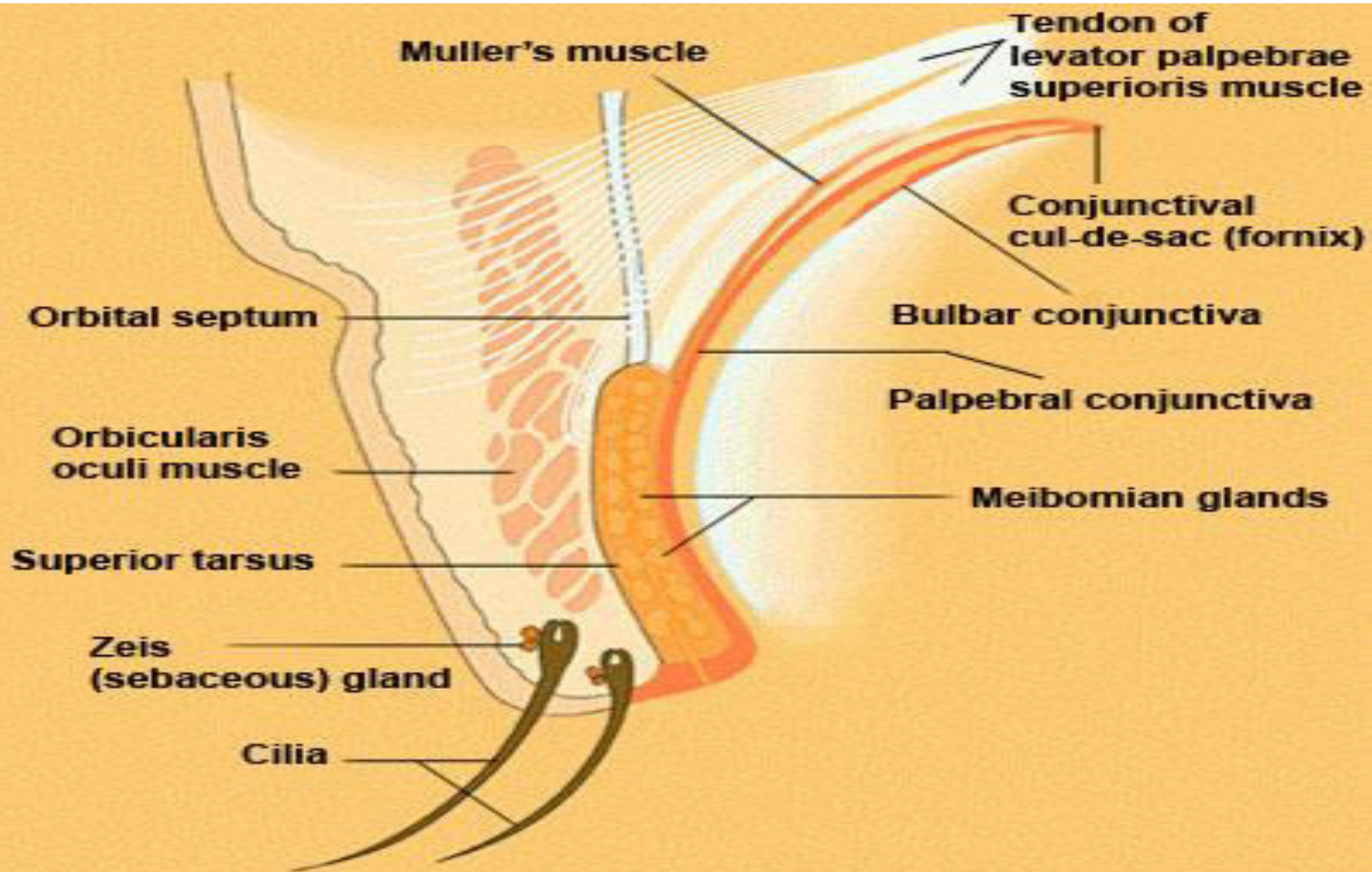
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Layers of lid

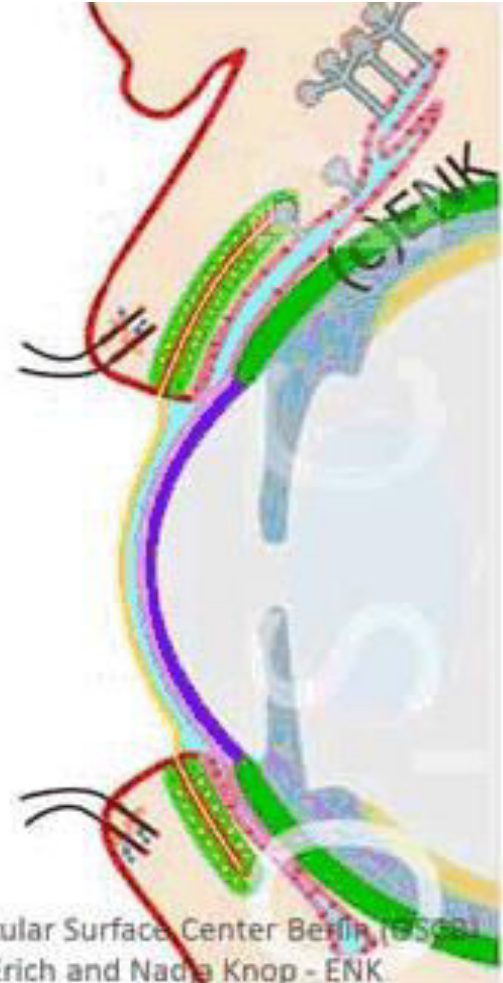
- Anterior lamella
- Skin
- Orbicularis muscle

- Posterior
- Tarsal plate
- Conjunctiva

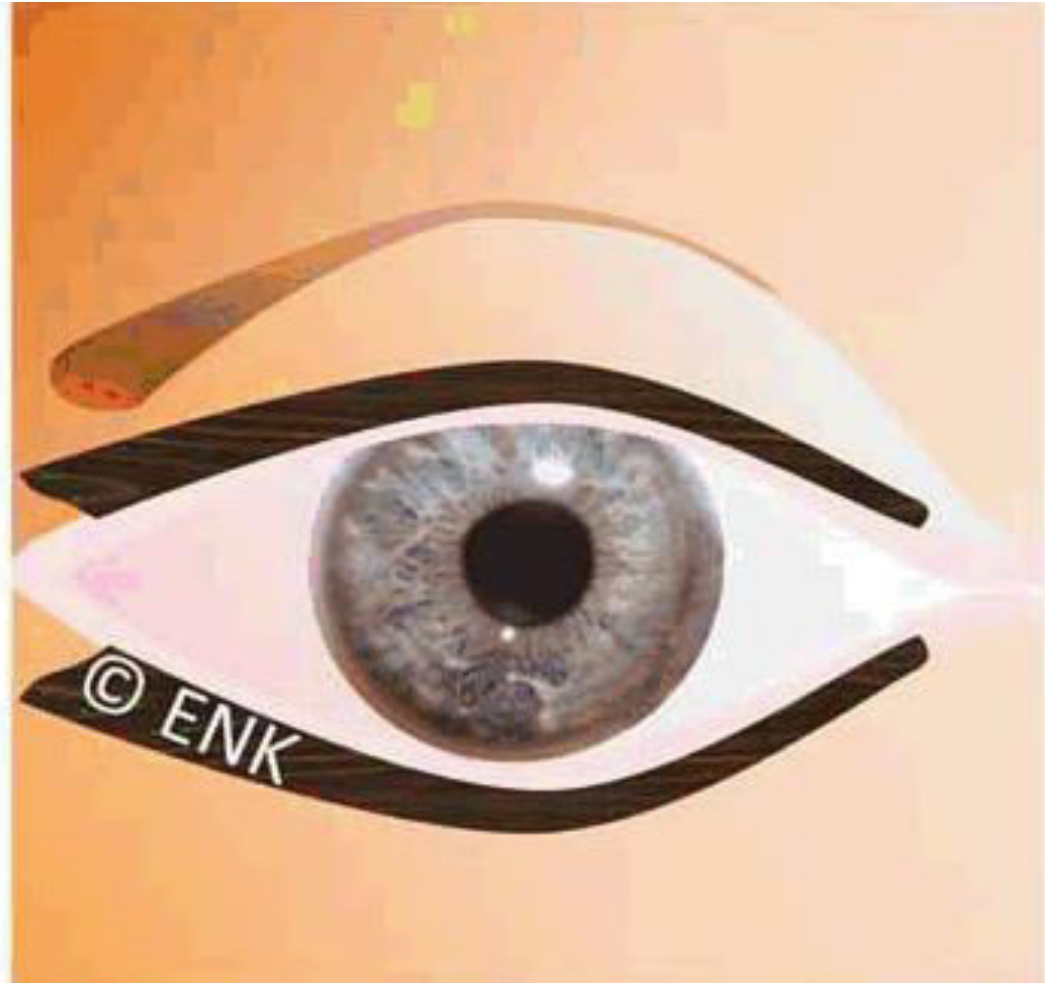


Functions Of Eyelids:

- I. Act to protect the anterior surface of the globe from local injury.
- II. Aid in regulation of light reaching the eye.
- III. Tear film maintenance by distributing the protective optically important tear film over the cornea during blinking.
- IV. Tear flow by their pumping action on the conjunctival sac and lacrimal sac.



Ocular Surface Center Berlin (OSCB)
– Erich and Nadja Knop - ENK



Cont...

- **Functions:**
 - Forms hydrophobic barrier at the margin of the eyelid, preventing spillage of tears at the lid margin
 - Forms oily layer of tear film over cornea & bulbar conjunctiva
 - ↓
 - Retards evaporation of tears.

- ➔ **Eyelids acts as shutters protecting the eye from injuries and excessive light**
- ➔ **Help in spreading tear film over cornea and conjunctiva via blinking and also helps eliminate tears from lacrimal lake**
- ➔ **Contribute to facial features of the individual**
- ➔ **Relay information regarding the state of wakefulness and attention of the person**

Eyelids Function

- **Mechanical defense** The lid, via the tarsal plate and muscles, forms a shield and mechanical barrier from the external world. This serves to protect the globe from injury and/ or excess light. This is an example of “native immunity” by acting as a barrier.
- **Optical**; Keeps the tear layer smooth via blinking. This maintains the optical clarity by resurfacing tears, which is important for visual acuity and contrast sensitivity.
- **Assist immune system** Via blinking, the lid removes pathogens in the tears. It also replenishes immunological substances which inhibit bacterial growth, such as Lysozyme, lactoferrin, beta lysine, Immunoglobulins (IgG, E, M)

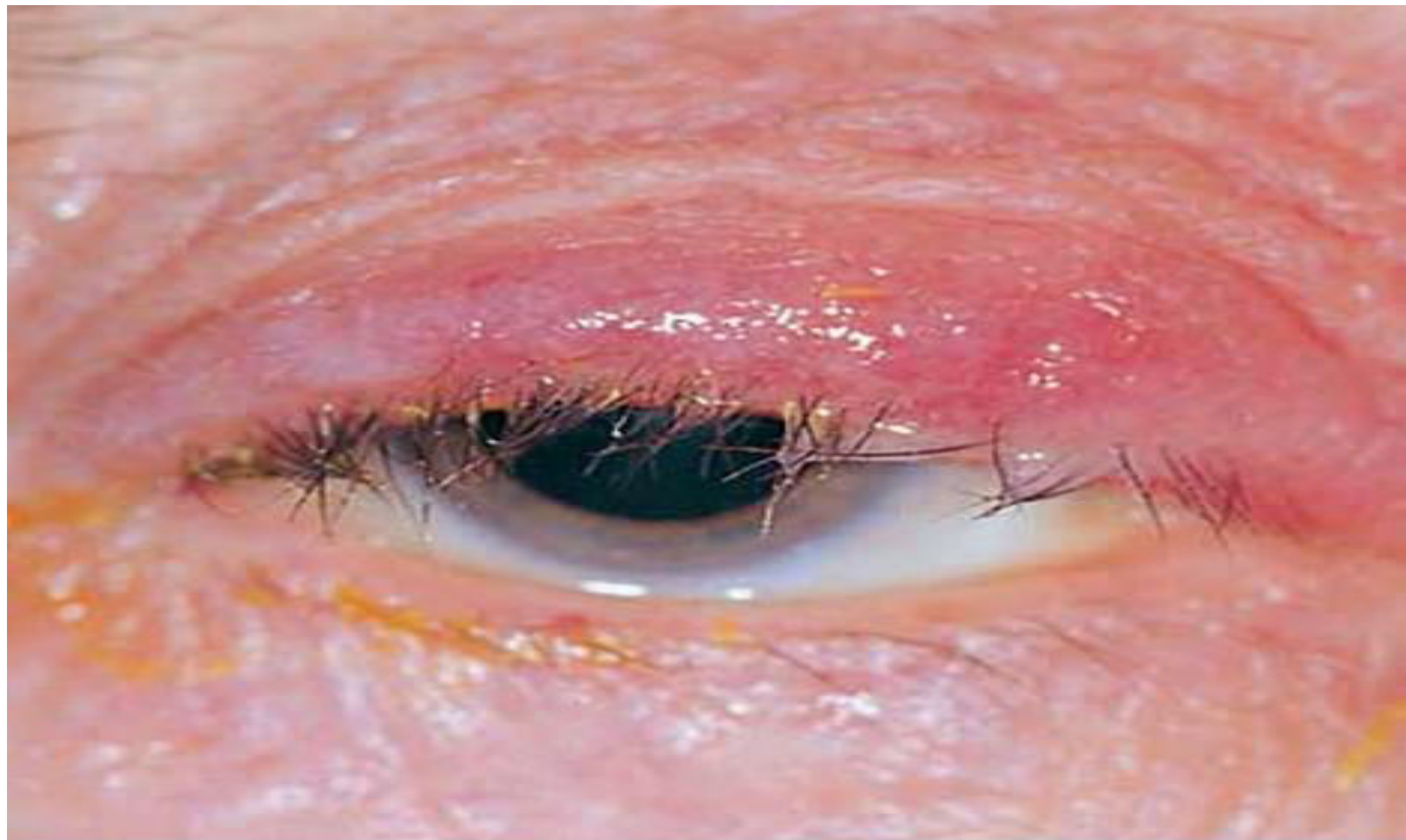
- Facilitate corneal metabolism
- With blinking, oxygen
- is distributed and waste products (carbon dioxide and lactic acid) are removed.
- Reduce visual stimuli
- Decreased light with closure

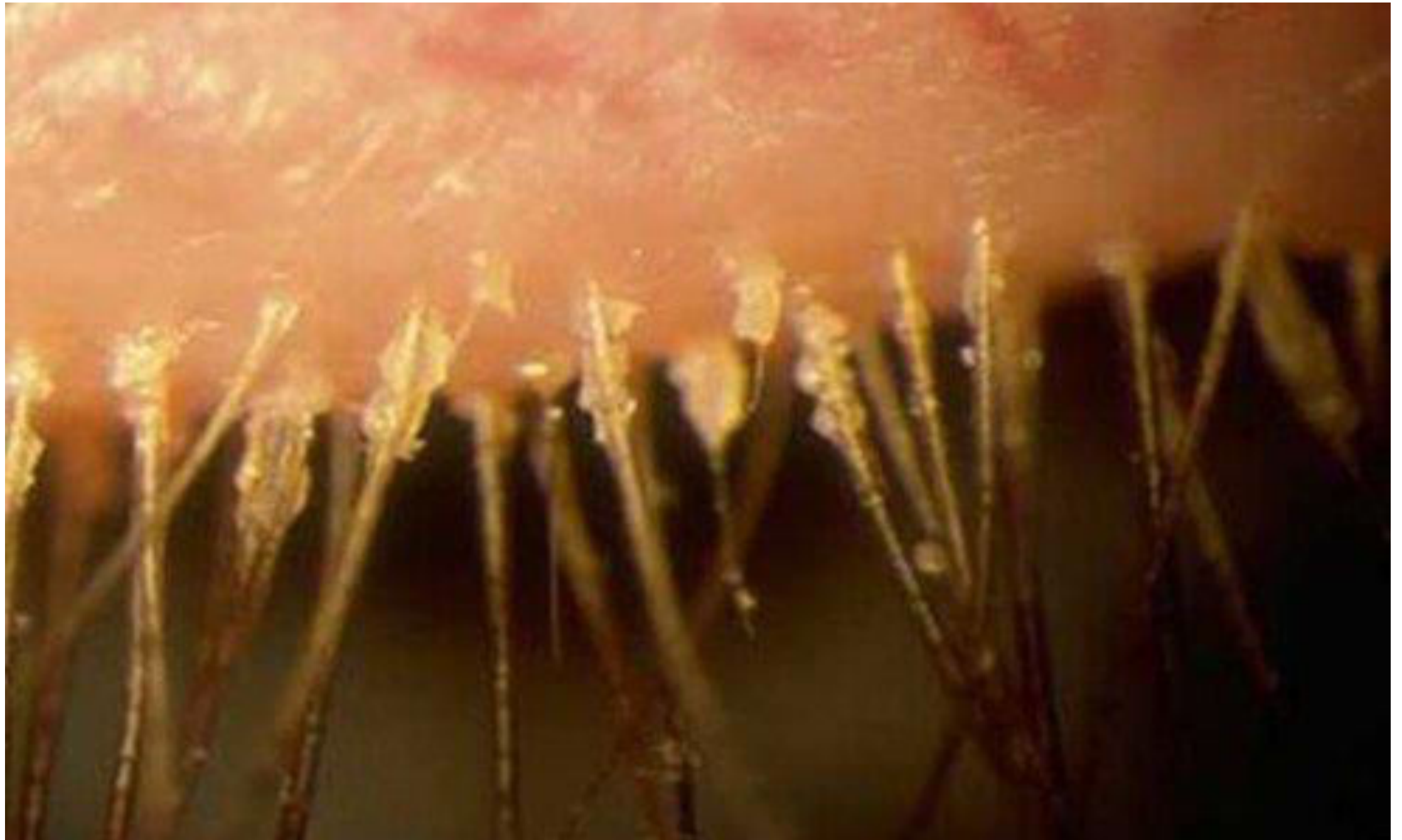
- Blepharitis can be divided into anterior and posterior according to anatomic location, although there is considerable overlap and both are often present.
- Anterior blepharitis affects the eyelid skin, base of the eyelashes, and the eyelash follicles and includes the traditional classifications of staphylococcal and seborrheic blepharitis.
- Posterior blepharitis affects the meibomian glands and gland orifices and has a range of potential etiologies, the primary cause being meibomian gland dysfunction MGD



Anterior Margin

Posterior Margin



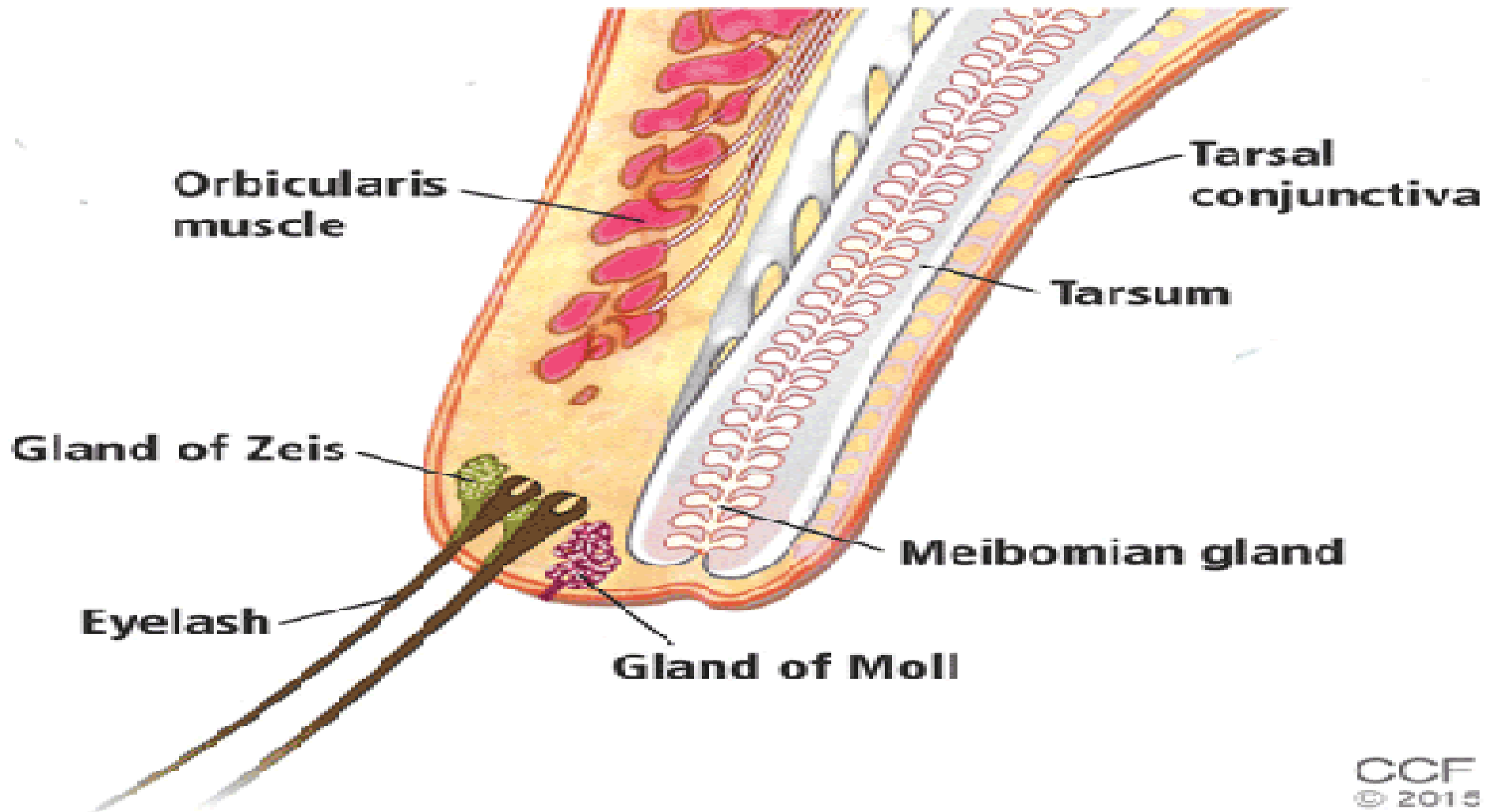


Types

- **Anterior;** it involves the area surrounding the basis of eye lashes.
 - May be
 - A) Infective/ulcerative
 - B) Non-infective/seborrhic blepharitis
- **Posterior/Meibomianitis**

Anterior ulcerative blepharitis

- It is the blepharitis in which there is acute & chronic infection and inflammation of lash follicle associated with gland of Zeiss and Moll
- **Etiology** bacterial infection mainly
- Staphylococcus aureus, staphylococcus epidermidis
- **Clinical features;**
- History of chronic irritation, redness, itching, lacrimation, glueing of lashes and photophobia & chalazion formation
- It is usually bilateral



Contd

- **Signs;**
- Lid margins are swollen, red & inflamed.
- Yellow pus secretion of suppurative lesion which when dries up leads crusts formation
- Crusts tend to be centred around the bases of lashes. When you remove it there will be tiny ulcer behind.
- Eye lashes involvement is more in infective than in seborrheic type.
- Eyelashes may be matted together



Complications

- **Lids**; it can lead to
 - Misdirected eyelashes Trichiasis,
 - Loss of lashes Madarosis,
 - Whitening of lashes poliosis,
 - Recurrent stye & chalazion and ptosis due to edema
- **Conjunctiva** Recurrent attacks of mild bacterial conjunctivitis and papillary conjunctivitis
- **Cornea** Marginal Keratitis and toxic punctate keratitis
- Due to toxin released by the staphylococcus bacteria

Triachiasis



Poliosis



Medarosis



Stye & Chalazion



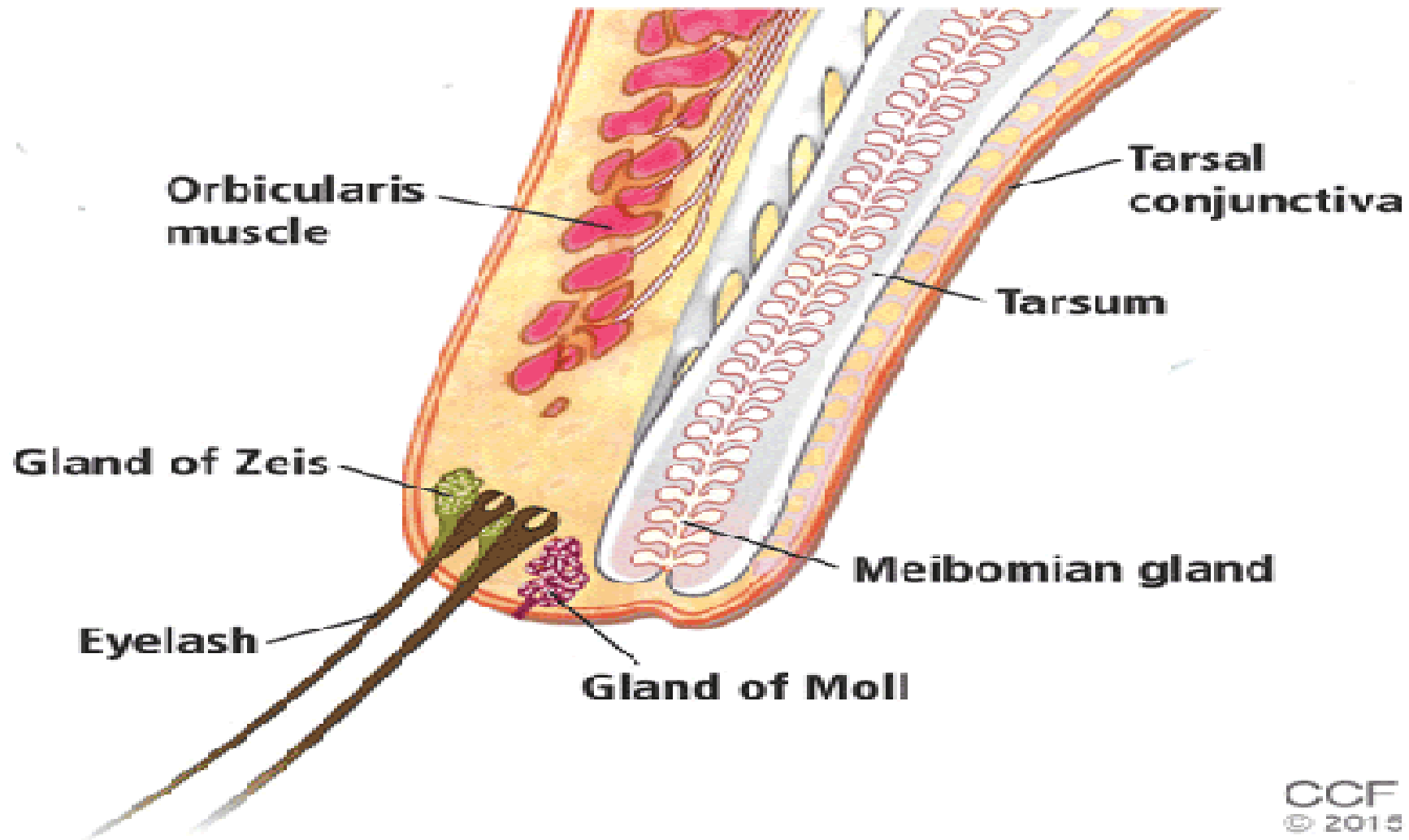
Chalazion & Ptosis





Ant Seborrhic /Squamous blepharitis

- It is the type of blepharitis In which there is problem in the glands of Zeis & Moll.
- **Aetiology** is not exactly known
- Some metabolic disorder,?
- Associated with seborrhic dermatitis, Rosacea and Atopic dermatitis
- The gland of Zeis secretes abnormal excessive neutral lipids which are then split into irritating free fatty acid by the *Corynebacterium acne*.



Clinical features

- Symptoms,
- Discomfort, irritation, redness,
- Watering and
- Falling of eyelashes

- Signs

- Lid margins have a shiny and waxy appearance
- Erythema and telangiectasia
- White yellow dandruff like scaly material which is the desquamation of the epidermis, located at the eyelashes and lid-margins
- Scales are soft easy to remove with no ulcer
- Lashes are greasy
- In sever cases Lid margins are swollen



Complications

- Trichiasis
- Loss of lashes (madarosis)
- Whitening of lashes (poliosis)
- Conjunctivitis
- Tear film instability in 25-30%
- Chalazion formation

Blepharitis chalazian

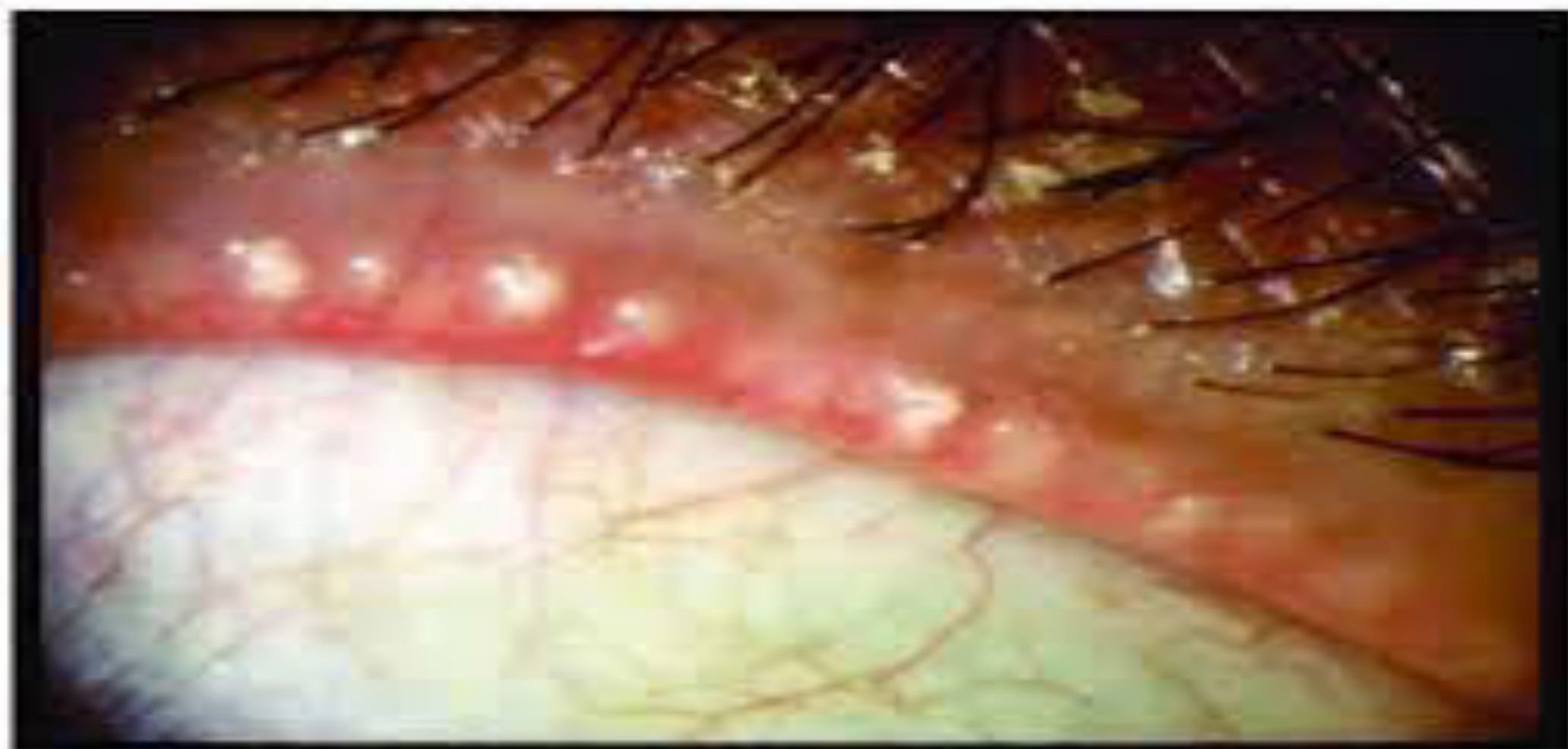


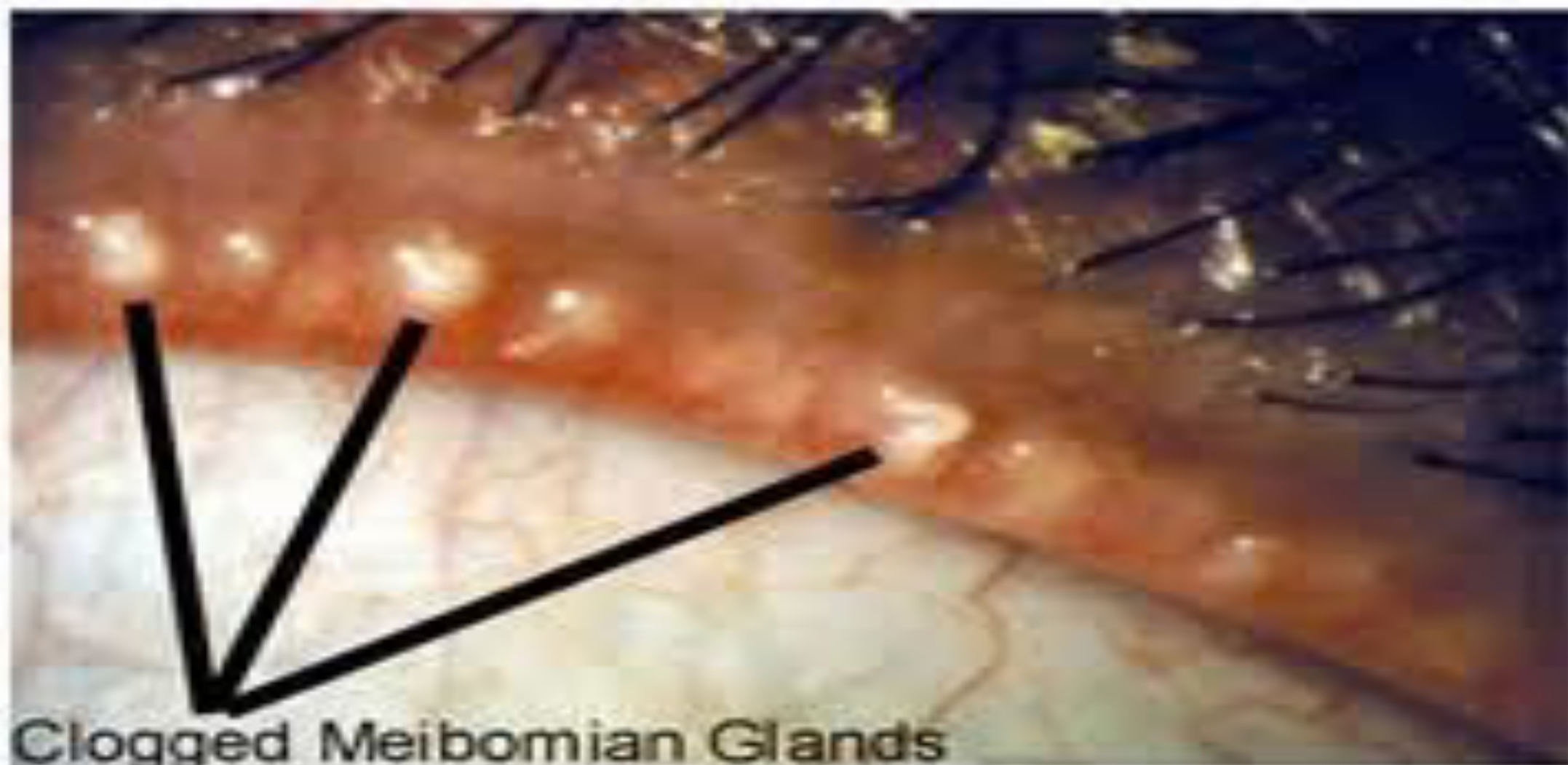
Post blepharitis/ Meibomitis

- It is the type of blepharitis in which mainly the post margin of the lid margin is involved leading to diffuse inflammation of meibomian glands and hypersecretion of gland

Clinical features

- Burning sensation, irritation redness due to excessive secretion of the fatty acid
- White frothy foam like secretion at lid margins and canthi
- The orifices of the gland are pouting and are capped with small oil globule
- On lid eversion the M-glands ducts are yellow white lines through the conjunctiva
- On massage, oily secretion come out
- Duct obstruction lead to chalazion formation





Clogged Meibomian Glands

Complications

- Chalazion formation
- Papillary conjunctivitis
- Tear film instability 25-30 %
- Cornea Punctate epithelia erosions

Treatment

- Local Lid hygiene
- Topical , Antibiotics & steroid drops
- Artificial tears
- Systemic antibiotic
- Tetracycline
- Doxycycline
- Erythromycine

Categorization of blepharitis

	Infectious	Seborrheic	Melibomian gland dysfunction
Location	Anterior eyelid	Anterior eyelid	Posterior eyelid
Loss of lashes	Frequent	Rare	None
Lid margin	Hard, fibrinous scales with matted crusts	Oily or greasy	Unusual
Lid ulceration	Occasionally	None	None
Conjunctivitis	Papillary with occasional purulent discharge	Follicular or papillary tarsal reaction with mild hyperemia	Papillary tarsal reaction with mild-to-moderate hyperemia
Keratitis	Inferior punctate erosions, marginal infiltrates, vascularization, phlyctenules	Inferior punctate erosions	Inferior punctate erosions, marginal infiltrates, vascular pannus
Tear film disruption	Occasional	Occasional	Occasional
Rosacea	Negative	15%–25%	40%–50%



	Hordeolum (Stye)	Chalazion
Location	Most commonly found at or near an eyelash follicle	Most commonly found above the eyelashes on the upper lid
Cause	Bacterial infection either at the root of the eyelash follicle or in the oil gland of the lids	A blocked oil gland (Meibomian or Zeiss)
Symptoms	Tenderness, swelling	Firm, painless lump
Treatment	Spontaneous drainage, warm compresses	Warm compresses, antibiotic eyedrops, surgery

Phthiriasis Palpebrarum

- Eye lashes infestation with phthirus pubis (Crab lice)
- Transmitted through
- Sexual activity
- Closed contact with infected person
- Use of contaminated clothes towels & beddings

Clinical features

- Symptoms
- Blepharitis like features redness foreign body sensation
- Severe itching and irritation are the main symptoms

- Signs on slit lamp examination with red lid margins
- Numerous nits & eggs are adherent to the lashes root
- Adult lice are stick to eyelashes
- Blood stained debris may be present

- Diagnosis is made by slit lamp examination



Figure. The adult louse, along with the nits, is attached to the eyelash.



Treatment

- Lid hygiene improving
- Mechanical removal of the lice & nit with forceps
- Eyelashes shaving and removal
- Petroleum jelly twice daily for 14 days
- Yellow mercuric oxide 1% oint 4 times 14 days
- Laser therapy
- Cryotherapy
- Permethrin/ Malathion anti lice shampoo 1% twice

- Thanks

