Conjunctiva Lecture 1

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Subdivision of Lectures

APPLIED ANATOMY

- Parts
- Structure
- Glands

SYMPTOMATIC CONDITIONS

- Hyperaemia
- Chemosis
- Ecchymosis
- Xerosis
- Discoloration

DEGENERATIVE CONDITIONS

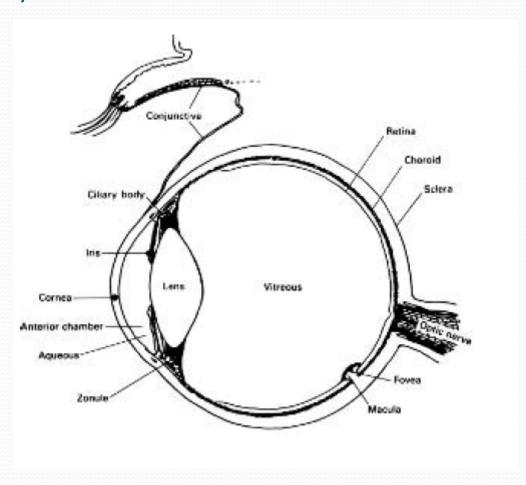
- Pinguecula
- Pterygium
- Concretions

INFLAMMATIONS OF CONJUNCTIVA

- Infective conjunctivitis
- Bacterial
- Chlamydial
- Viral
- Allergic conjunctivitis
- Granulomatous conjunctivitis

CYSTS AND TUMOURS

Conjoin: to join..... has been given to this mucous membrane owing to the fact that it joins the eyeball to the lids.



Palpebral conjunctiva

Marginal conjunctiva extends from the lid margin to about 2 mm on the back of lid up to a shallow groove, the *sulcus subtarsalis*.

Tarsal conjunctiva is firmly adherent to the whole tarsal plate in the upper lid. In the lower lid, it is adherent only to half width of the tarsus.

Orbital part of palpebral conjunctiva lies loose between the tarsal plate and fornix.



Bulbar conjunctiva

- Lies loose over the underlying structures and thus can be moved easily.
- It is separated from the anterior sclera by episcleral tissue and Tenon's capsule.
- A 3-mm ridge of bulbar conjunctiva around the cornea is called *limbal* conjunctiva.
- In the area of limbus, the conjunctiva, Tenon's capsule and the episcleral tissue are fused into a dense tissue which is strongly adherent to the underlying corneoscleral junction.

At the limbus, the epithelium of conjunctiva becomes continuous with that of cornea

Eyelid

Bulbar region

Forniceal Conjunctiva:

- Joins the bulbar conjunctiva with the palpebral conjunctiva.
- It can be subdivided into superior, inferior, medial and lateral fornices.

Caruncle:

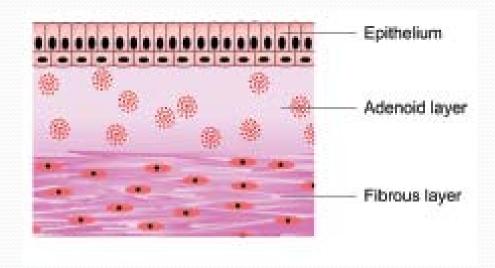
- Small (5 x 3 mm) fleshy nodular prominence in nasal portion of interpalpebral fissure between skin and conjunctiva
- lined by conjunctival epithelium and nonkeratinized squamous epithelium; contains cutaneous adnexal structures, accessory lacrimal gland tissue

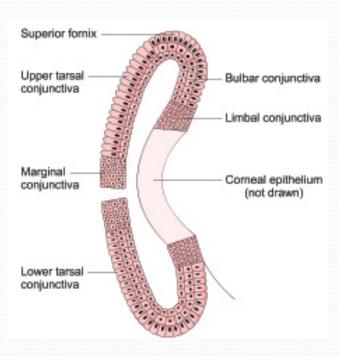
Punetum lacrimali Plica semilunari

Histologically

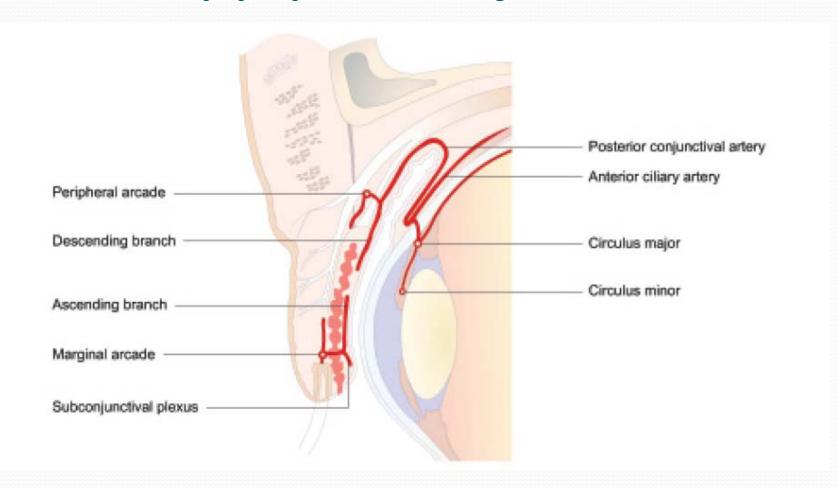
Three layers

(1) epithelium, (2) adenoid layer, and (3) fibrous layer





Blood supply of conjunctiva



Venous drainage:

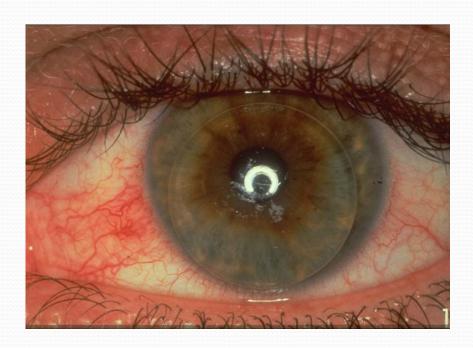
Drain into the venous plexus of eyelids and some around the cornea into the anterior ciliary veins.

Nerve supply of conjunctiva

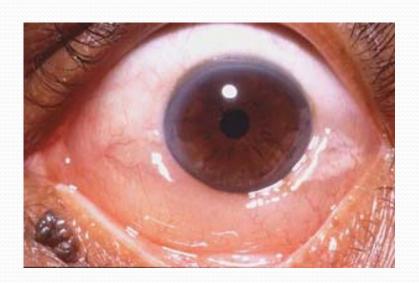
- A circumcorneal zone of conjunctiva is supplied by the branches from long ciliary nerves which supply the cornea.
- Rest of the conjunctiva is supplied by the branches from lacrimal, infratrochlear, supratrochlear, supraorbital and frontal nerves.

Injection

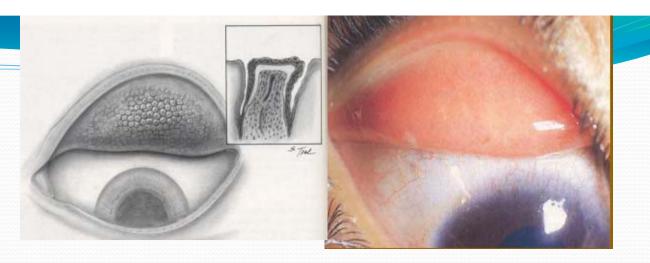
• Dilation of the conjunctival vasculature



Chemosis



Papillae

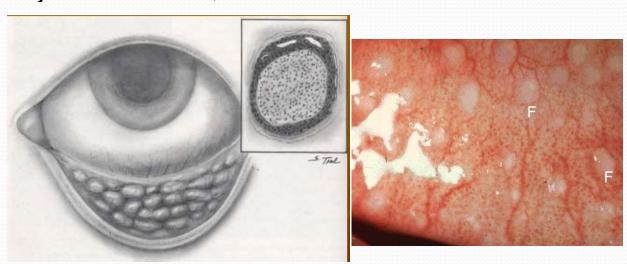


- Non-specific and less diagnostic
- Conjunctival epithelial hyperplasia
- Central vascular core, Surrounded edema and inflammatory cells
- Fibrous septa
- GPC



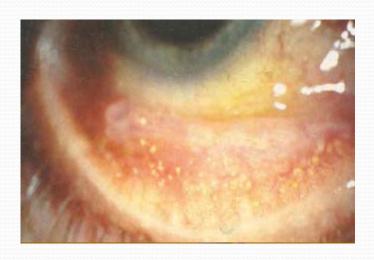
Follicles

- Raised, gelatinous, oval lesions about 1mm in diameter found usually in the lower tarsal conjunctiva and upper tarsal border, and occasionally at the limbus.
- Each follicle represents a lymphoid collection with its own germinal centre.
- Unlike papillae, the causes of follicles are more specific (e.g. viral and chlamydial infections).



Conjunctival concretions:

- Epithelial inclusion cysts
- Filled with epithelial and keratin debris,
- Common in elderly
- In cases of chronic conjunctivitis,
- Remove if there is irritation



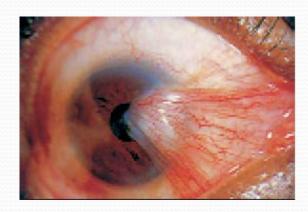
Pterygium

- •Greek word *pterygion* meaning "wing".
- •Elastoid degeneration
- •Causes: Sun (uv light), wind
- •Usually nasal side
- Also called as "Surfer's eye"
- Rx:

Surgery: Excision with conjunctival autograft

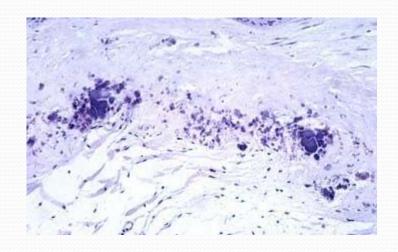
•When to consider surgery?

Corneal astigmatism, visual axis involvement and cosmetic reasons





Kissing Pterygium



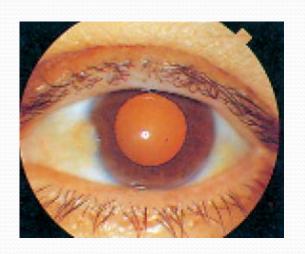
Basophilic degenerations

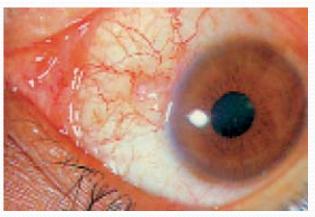
Staging of Pterygium:

Stage I	Minimum invasion, thin translucent growth, thin vessels
Stage II	Moderately thick pannus, deep vessels not visible, significant invasion of cornea
Stage III	Thick fleshy growth covering pupil, dense vascularisation

Pinguecula

- Benign
- Composed of collagen and elastin





Subconjunctival hemorrhage

Causes:

- spontaneous, or
- rubbing of the eye,
- vomiting,
- coughing,
- elevated blood pressure,
- or, rarely, bleeding disorders.

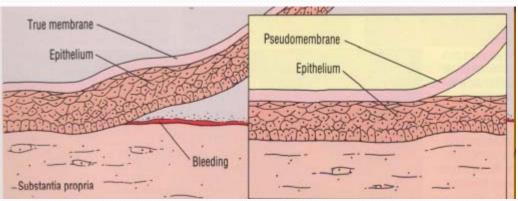
Recommend no rubbing, and no exercise or bearing down.

Subconjunctival haemorrhage

• Bright red in colour because it is fully oxygenated by the ambient air, through the conjunctiva.

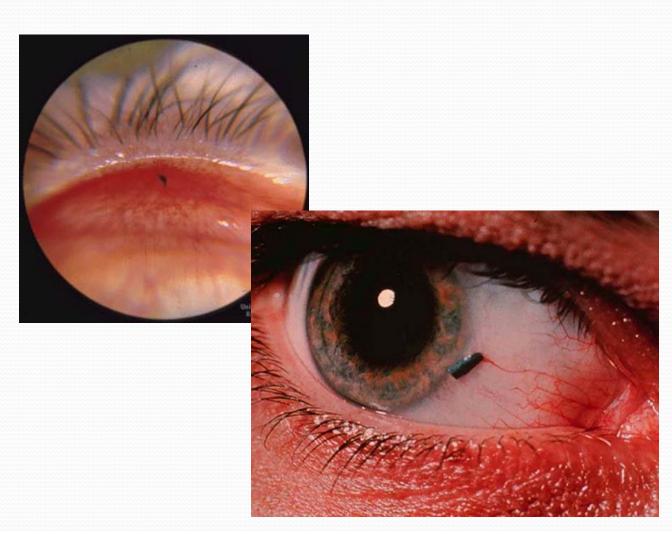


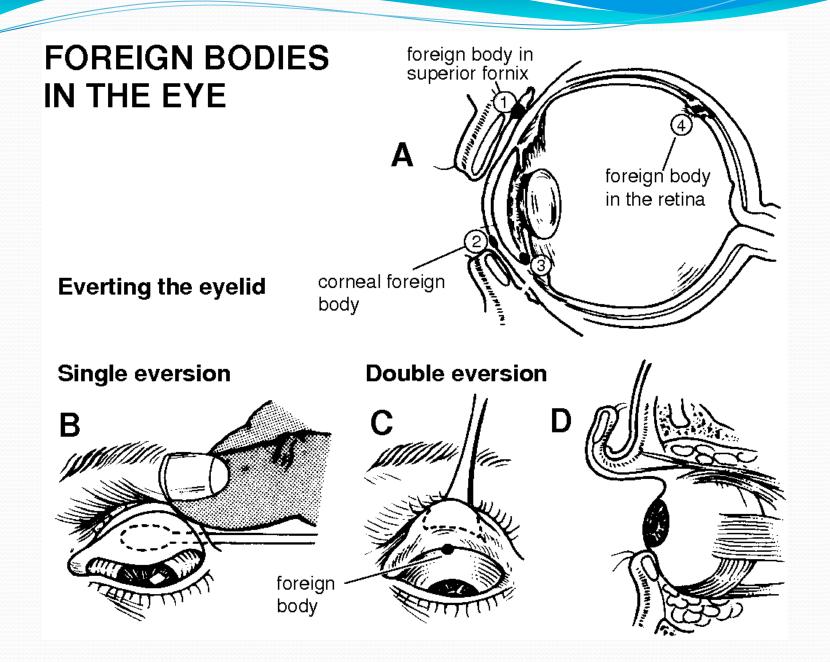
Conjunctival membrane:





Foreign body





Conjunctival Xerosis:





- Vitamin A plays a role in mucin and keratin expression
- Def of Vit A leads to altered mucin expression in goblet cells and hence keratinisation of conjunctival epithelium