Degenerative Changes of the Conjunctiva

Introduction

degeneration

- decomposition and deterioration of tissue elements and functions
- etiology
  - aging
  - specific diseases
  - chronic environmental insults
- unilateral or bilateral
  - if bilateral, may be asymmetric

Age-Related (Involutional) Changes

- conjunctiva loses transparency
- conjunctiva becomes thinner
- substantia propria (stroma) becomes less elastic
  - conjunctival laxity
- vessels become more prominent
  - saccular telangiectasias, fusiform dilatory changes, or tortuosities
- more pronounced in the area of the interpalpebral fissure

Pinguecula

- bilateral
- yellow-white elevated mass
  - enlarge gradually over long periods of time

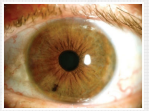

Figure 12-1 (© 2020 American Academy of Ophthalmology)

- nasal bulbar conjunctiva, adjacent to the limbus in the interpalpebral zone
- etiology
  - aging, UV-light exposure, and other environmental traumas
- +- cause recurrent inflammation and ocular irritation
- pathology
  - elastotic degeneration of subepithelial collagen
  - hyalinized connective tissue
- treatment
  - Lubricant therapy
  - excision is indicated only when
    - cosmetically unacceptable
    - chronically inflamed
    - interfere with successful contact lens wear
  - topical corticosteroids
    - if inflamed

Pterygium

epidemiology

- etiology
  - UV-light exposure
  - environmental traumas
- more common in
  - near equator
  - men
    - age=20–30 years
  - outdoor work

clinical presentation

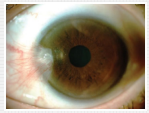

Figure 12-2 (© 2020 American Academy of Ophthalmology)

- wing-shaped growth of conjunctiva and fibrovascular tissue on the superficial cornea
- nasal side in the interpalpebral zone
- nearly always preceded by pinguecula
- corneal scarring
- regular and irregular astigmatism
- Stocker line
  - pigmented iron line
    - central anterior edge of the pterygium on the cornea

pseudopterygium

- secondary to trauma or inflammatory corneal disease

treatment

- artificial tears
- topical corticosteroids
  - long-term use of topical corticosteroids is contraindicated
- Excision is indicated if
  - pterygium approaches the visual axis
  - exhibits rapid growth
  - causes chronic irritation
  - cosmetically unacceptable

Conjunctival Inclusion Cysts

types

- congenital
- acquired

- bulbar conjunctiva or conjunctival fornix
- central fluid-filled cavity in the substantia propria
  - lined by nonkeratinized conjunctival epithelium
    - from conjunctival epithelium
  - lined by a double layer of epithelium
    - from ductal epithelium of the accessory lacrimal glands

clear

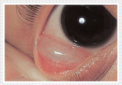

Figure 12-3 (© 2020 American Academy of Ophthalmology)

- corneal epithelial inclusion cyst
  - rare
- risk factors
  - chronic inflammation
  - trauma
  - surgery
- differential diagnosis
  - dilated lymphatic channels
- treatment
  - observe
    - most commonly asymptomatic
  - re-form after simple drainage
  - complete excision

Conjunctival Vascular Tortuosity and Hyperemia

- See Table 12-2

Conjunctivochalasis

poor adherence of the bulbar conjunctiva

- +- overhangs the lower eyelid margin

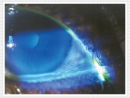

Figure 12-4 (© 2020 American Academy of Ophthalmology)

- risk factors
  - chronic inflammation
  - aging
- symptoms
  - usually asymptomatic
  - aggravation of dry eye
  - secondary tearing due to occlusion of the lower punctum when the chalasis is prominent medially
  - exposure-related pain and irritation
- histopathology
  - increased tear inflammation
  - loss of conjunctival epithelial cohesiveness
  - chronic nongranulomatous inflammation
  - elastosis
  - collagenolysis
- treatment
  - lubricants
  - anti-inflammatory agents
  - antihistamines
  - nocturnal patching
  - surgical excision
  - conjunctival fixation to the sclera
  - amniotic membrane grafting
  - cauterization of the redundant folds

Conjunctival Concretions

- predisposing conditions
  - older age
  - chronic conjunctivitis
- small, yellow-white dots
- palpebral conjunctiva
- epithelial inclusion cysts filled with
  - epithelial and keratin debris
  - mucopolysaccharide and mucin
- almost always asymptomatic
- erosion of overlying conjunctiva
  - foreign-body sensation
- if symptomatic remove under topical anesthesia

Ophthalmology Mind Maps/Arman Mashayekhi, MD