Endophthalmitis

Cystoid Macular Edema

Cornea

2006

Anatomy and Physiology of Cornea
Clinical Interpretation of Corneal Lesions

Neovascularization

• Usually no symptoms or decreased VA unless invades visual axis

• **Superficial**: bright red, usually irregular, wavy, uninterrupted pattern into the cornea from conjunctival circulation

• **Pannus**: A superficial neovascularization associated with fibrovascular proliferation (a cloth-like opacity with neovascularization)

• Limbal engorgement

Pannus

• **Micropannus**: where vessels extend only 1-2mm beyond the normal arcade

• **Gross pannus**: extend more than 2mm

Etiology

• Can occur with any chronic or recurrent corneal inflammation, severe acute inflammation or ulcerative keratitis
• Deep: (two types: stromal and interstitial)--
dark purple; run in straight lines; brush-like;
disappear at limbus; deep marginal plexus
• Stromal neovascularization
• Interstitial- deep neo associated with
  systemic diseases-- syphilis, tuberculosis,
  herpes, Lyme disease, leprosy
• Ghost Vessels: Neovascularization devoid
  of blood: faint gray-white outline of vessels
Luetic Interstitial Keratitis

- Usually develops in the 1st or 2nd decade of life and is caused by congenital syphilis.
- Other signs of congenital syphilis: dental & facial abnormalities, eight-cranial nerve deafness.
- Bilateral in 80%.
- Initial symptoms: pain, tearing, photophobia, perlimbal injection, blurred vision.
- Stromal inflammation/edema. KPs: progressive to deep stromal neovascularization, edema, infiltration = Salmon patch.
- Sequelae: corneal scarring, thinning, ghost vessels, irregular astigmatism.

Edema

- Symptoms: Halos, decreased visual acuity.
- Signs: Loss of transparency, dullness, or haziness.
- Etiology:
  - Damage or alteration of the epithelium or endothelium, acute elevation of IOP.
  - Deprived of atmospheric oxygen or tears have become hypotonic.

Types

- Epithelial and subepithelial — dull, hazy, irregular surface, ground glass appearance.
- Microcystic edema - early epithelial edema with fine clear cysts (bedewing). NaFl reveals negative staining, with coalesce of cysts epithelial bullae develop.
- Stromal edema — cloudy, hazy stroma - Causes: Disciform keratitis, keratoconus, Fuch’s, or surgical trauma to endothelium.
Bullous Keratopathy

- Endothelial decompensation due to reduced endothelial cell count, causing poor corneal dehydration
- Stromal and epithelial edema, (microcysts to bullae): due to prolonged stromal & epithelial edema
- Etiology: Postoperative complication, Fuchs’ & other endothelial dystrophies, degeneration, trauma, glaucoma, iridocorneal endothelial syndrome, keratoconus (hydrops), corneal graft failures, congenital edema