Ocular Surface Inflammation and Allergy

Dr David Pendergrast
Ocular Surface Inflammation and Allergy

- Watery eye in an infant (Oph03)
- Itching child (Derm01)
- Facial swelling and itchy rash (Derm04)
## Red Eye

<table>
<thead>
<tr>
<th></th>
<th>Pain</th>
<th>Vision</th>
<th>Redness</th>
<th>Discharge</th>
<th>Cornea</th>
<th>Pupil</th>
<th>IOP</th>
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<td>Clear</td>
<td>Reg</td>
<td>Normal</td>
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<td>Watery</td>
<td>Pathology</td>
<td>Reg</td>
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<td>ACG</td>
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<td>Diffuse</td>
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Papillae versus Follicles

- **Papillae**
  - Chronic inflammation
  - Allergy
  - C/L, sutures, prosthesis
  - Cobblestones
  - Central vascularity

- **Follicles**
  - Acute inflammation
  - Viral
  - Chlamydial
  - Toxic
  - Pale lesions
  - Surrounding vessels injected
Papillae
Allergic Conjunctivitis: acute to chronic

- Acute hayfever conjunctivitis
- Seasonal allergic conjunctivitis
- Perennial allergic conjunctivitis
- Vernal keratoconjunctivitis
- Atopic keratoconjunctivitis
Allergic conjunctivitis: papillae
Giant Papillae

Vernal Contact lens
Vernal Keratoconjunctivitis

- Age 9 to 19
- Boys > Girls
- Warm dry climates
- Symptoms: itching, mucus, photophobia
- Signs: superior tarsal or limbal papillae
- Pseudogerontoxon
- Peripheral fibrovascular pannus
- Shield ulcer
Persistent Epithelial defect
Physical trauma from papillae, rubbing
Chemical trauma from inflammatory mediators
Mucous plaque formation
Atopic Keratoconjunctivitis

- Adult onset
- Symptoms: itch, photophobia, watering
- Signs: redness
- Fine papillary reaction
- Periorbital atopic eczema
- Microbial keratitis esp. opportunistic
- Deep corneal vessels and scarring
Pathophysiology: Mast Cells

Mast cell degranulation in response to:
- Allergens and IgE
- Physical trauma (rubbing)
- UV exposure
- Increased ocular surface temperature
- Bacterial lipopolysaccharides
Avoidance of allergens and rubbing

Cold compresses

Topical antihistamines: rapid onset

Systemic antihistamines: slower onset

Mast cell stabilisers: preventative use

Topical NSAIDs: Acular has some effect

Dual action agents: best current therapy

• Patanol
Topical corticosteroids
  - Introduce at high frequency, tail off rapidly

Topical cyclosporine 2% ointment

Systemic immunosuppression

Surgery:
  - Excision of papillae
  - Superficial keratectomy
Marginal keratitis: hypersensitivity reaction to staph. toxins
Marginal Keratitis
Rosacea, blepharitis, C/L wear
Adenovirus Keratoconjunctivitis
Pseudomembranous conjunctivitis
Herpes simplex blepharo-conjunctivitis

50% develop keratitis
50% will heal without Rx
Acyclovir 95% heal within 2 weeks
25% risk recurrence within 5 years
Amoeboid Ulcer
Disciform Keratitis
Anaesthetic, Scarred Vascularised Cornea
Corneal transplantation
The End

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