The Red Eye

GP Update 2010 - Mr Vaughan Tanner

www.tanner-eyes.co.uk

Reading
Royal Berkshire Hospital
Dunedin Hospital

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The Red Eye

- Lids
- Conjunctiva
- Sclera
- Cornea
- Uveitis
- Glaucoma
- Others

- Duration?
- Is it painful?
- Is vision decreased?
Staphylococcal blepharitis

- Chronic irritation
- Worse in mornings
- Scales around base of lashes (collarettes)

- Hyperaemia and telangiectasia of anterior lid margin
- Scarring and hypertrophy
Complications of staphylococcal blepharitis

- Trichiasis
- Marginal keratitis
- Recurrent styes
- Tear film instability
Treatment of Chronic Blepharitis

1. Lid hygiene
   – clean debris from lashes at night with cotton bud

2. Chloramphenicol Ointment
   – to lid margins at night

3. Tear substitutes - for associated tear film instability
   Hypromellose, Optive, Celluvisc

4. Oral Lymecycline 408 mg OD one month –
   very useful in most cases
CONJUNCTIVAL INFECTIONS

1. Bacterial
   • Simple bacterial conjunctivitis

2. Viral
   • Adenoviral keratoconjunctivitis
   • Molluscum contagiosum conjunctivitis
   • Herpes simplex conjunctivitis

3. Chlamydial
   • Adult chlamydial keratoconjunctivitis
   • Neonatal chlamydial conjunctivitis
   • Trachoma
Simple bacterial conjunctivitis

Crusted eyelids and conjunctival injection

**Treatment**
- broad-spectrum topical antibiotics
- Chloramphenicol or Fucithamic (soothing base ointment)
- One week only to avoid drop allergy
- Suggest lubricants for persistent irritation/redness
Viral conjunctivitis

Usually bilateral, acute watery discharge and follicles

Subconjunctival haemorrhages and pseudomembranes if severe

Treatment
- Tear substitutes or topical antibiotics
- Fucithalmic has very good carrier gel keeping eyes comfortable

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**Post Adenovirus Keratitis**

- Persistent photophobia
- Decrease acuity
- Following adenoviral infection

- Focal, subepithelial keratitis
- May persist for months

**Treatment** - topical steroids if persists
Molluscum contagiosum conjunctivitis

- Waxy, umbilicated eyelid nodule
- May be multiple

- Ispilateral, chronic, mucoid discharge
- Follicular conjuntivitis

**Treatment** - excision/cautery of eyelid lesion
**Adult chlamydial keratoconjunctivitis**

- Infection with *Chlamydia trachomatis* serotypes D to K
- Concomitant genital infection is common

**Subacute, mucopurulent follicular conjunctivitis**

**Treatment**
- oral tetracycline or erythromycin
- Consider and send swab in all persistent conjunctivitis if sexually active

**Variable peripheral keratitis**
Allergic rhinoconjunctivitis

- Hypersensitivity reaction to specific airborne antigens
- Frequently associated nasal symptoms
- May be seasonal or perennial
- Usually no treatment required

Transient conjunctival oedema

Transient eyelid oedema

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**Vernal keratoconjunctivitis**

Frequently assoc. with atopy: asthma, hay fever and dermatitis

- Recurrent, bilateral
- Affects children and young adults
- Itching, mucoid discharge and lacrimation

**Treatment**

- Topical mast cell stabilizers
  - Alomide - sodium chromoglycate
  - Lodoxamide
  - Rapitil
- Topical steroids

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Progression of vernal conjunctivitis

Cobblestone papillae

Giant papillae

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DIFFUSE EYELID DISEASE

1. Allergic
   - Acute oedema
   - Contact dermatitis
   - Atopic dermatitis
   - Blepharochalasis

2. Infections
   - Preseptal cellulitis
   - Herpes simplex
   - Herpes zoster ophthalmicus
   - Impetigo
   - Erysipelas
   - Necrotizing fasciitis

3. Miscellaneous
   - Systemic causes
Acute allergic oedema

- Causes - insect bites, urticaria and angioedema
- Unilateral or bilateral
- Painless, red, pitting oedema
- Chemosis may be present
- Self-limiting
Contact dermatitis

- Sensitivity to topical medication – stop all drops
- Unilateral or bilateral
- Painless oedema and erythema
- Vesiculation and crusting
- Thickening if chronic
Atopic dermatitis

- Associated with asthma and hay fever
- Chronic itching and scratching
Ocular associations of atopic dermatitis

- Thickening, crusting and fissuring
- Staph. blepharitis
- Angular blepharitis
- Vernal disease in children
Preseptal cellulitis

Causes
• Skin trauma or insect bites of lids or eyebrows
• Spread from local infection
• Upper respiratory or ear infection

Signs
• Usually unilateral
• Tender and red
• Periorbital oedema
• White eye

Prise lids apart – If eye white and normal VA just systemic Oral AB
Orbital cellulitis

- Infection behind orbital septum
- Usually secondary to ethmoiditis
- Presentation - severe malaise, fever and orbital signs

- Severe eyelid oedema and redness
- Proptosis
- Painful ophthalmoplegia
- Optic nerve dysfunction if advanced

Admit IV AB
Herpes simplex

Signs
• Crops of small vesicles
• Rupture and crust
• Heal without scarring after 7 days

Complications
• Follicular conjunctivitis
• Keratitis

Treatment
Topical acyclovir
Herpes zoster ophthalmicus

- Painful vesicles and pustules
- Peri-orbital oedema
- Crusting ulceration

Treatment
- oral antivirals and ophthalmic review ? uveitis

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Signs of chalazion (meibomian cyst)

Painless, roundish, firm lesion within tarsal plate

May rupture through conjunctiva and cause granuloma
Acute hordeolum

**Internal hordeolum**
(acute chalazion)

- *Staph.* abscess of meibomian glands
- Tender swelling within tarsal plate

**External hordeolum**
(stye)

- *Staph.* abscess of lash follicle and associated gland of Zeis or Moll
- Tender swelling at lid margin
- May discharge through skin
Treatment of chalazion

If persistent – Incision and curetage
Little benefit in antibiotics unless
a. Cellulitis – oral
b. Associated conjunctivitis - drops
Involutional Ectropion

- Affects lower lid of elderly patients
- May cause chronic conjunctival inflammation and thickening
Treatment of medial ectropion

Mild

Medial conjunctivoplasty
Treatment of extensive ectropion

Horizontal lid shortening
Involutional entropion

Affects lower lid because upper lid has wider tarsus and is more stable

If longstanding may result in corneal ulceration

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Pathogenesis of involutional entropion

- Canthal tendon laxity
- Horizontal lid laxity
- Overriding of preseptal orbicularis
Treatment options for involutional entropion

- Transverse everting sutures (temporary)
- Weis procedure (permanent)
Acute dacryocystitis

Usually secondary to nasolacrimal duct obstruction

- Tender canthal swelling
- Mild preseptal cellulitis
- May develop into abscess

- Systemic antibiotics
- DCR after acute infection is controlled
Marginal keratitis

- Hypersensitivity reaction to *Staph.* exotoxins
- May be associated with *Staph.* blepharitis
- Unilateral, transient but recurrent

Subepithelial infiltrate separated by clear zone
Circumferential spread
Bridging vascularization followed by resolution

Treatment - short course of topical steroids
Bacterial keratitis - refer

- Contact lens wear
- Chronic ocular surface disease
- Corneal hypoaesthesia

Expanding oval, yellow-white, dense stromal infiltrate
Stromal suppuration and hypopyon

Treatment - topical ciprofloxacin 0.3% or ofloxacin 0.3%
Herpes simplex epithelial keratitis

- Dendritic ulcer with terminal bulbs
- Stains with fluorescein
- No steroids

**Treatment**

- **Aciclovir 3% ointment x 5 daily**

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Herpes simplex disciform keratitis

- Central epithelial and stromal oedema
- Folds in Descemet membrane
- Small keratic precipitates

Treatment - topical steroids with antiviral cover
Episcleritis and Scleritis

- Maximal congestion of episcleral vessels
- Maximal congestion of deep vascular plexus
Simple episcleritis

- Common, benign, self-limiting but frequently recurrent
- Typically affects young adults
- Seldom associated with a systemic disorder

Treatment – Conservative, topical steroids, systemic NSAIDS
Diffuse anterior non-necrotizing scleritis

- Relatively benign - does not progress to necrosis
- Widespread scleral and episcleral injection

Treatment
- Oral NSAIDs
- Oral steroids if unresponsive
Anterior necrotizing scleritis

- Painful and most severe type
- Complications - uveitis, keratitis, cataract and glaucoma

Treatment

- Oral steroids
- Immunosuppressive agents (cyclophosphamide, azathioprine, cyclosporin)
- Combined intravenous steroids and cyclophosphamide if unresponsive
Systemic Associations of Scleritis

1. Rheumatoid arthritis

2. Connective tissue disorders
   - Wegener granulomatosis
   - Polyarteritis nodosa
   - Systemic lupus erythematosus

3. Miscellaneous
   - Relapsing polychondritis
   - Herpes zoster ophthalmicus
   - Surgically induced
Angle-closure glaucoma

Urgent referral
Oval pupil, pain, loss vision, dull cornea
Pain may be referred to frontal sinus
Often nauseu and vomit

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Treatment of Acute Angle-Closure Glaucoma

1. Acetazolamide i.v.

2. Topical therapy
   - Pilocarpine 2% to both eyes
   - Beta-blockers
   - Steroids

3. Hyperosmotic agents

4. YAG laser iridotomy
   - To both eyes when cornea is clear
Acute anterior uveitis

- Majority are men
- 45% are positive for HLA-B27
- Initially no systemic disease
- Minority subsequently develop ankylosing spondylitis
- If chronic disease - OK for GP to prescribe steroids while awaiting ophthalmic review
Complications of uveitis

- Posterior synechiae
- Cataract
- Glaucoma
- Band keratopathy
I am happy to take questions on red eye or any other topic to:
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Further info at
www.tanner-eyes.co.uk