The Red Eye
Differential Diagnosis
## Differential Diagnosis of “red eye”

<table>
<thead>
<tr>
<th></th>
<th>Conjunctiva</th>
<th>Pupil</th>
<th>Cornea</th>
<th>Anterior chamber</th>
<th>IOP</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Subconjunctival Haemorrhage</strong></td>
<td>Bright red</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Conjunctivitis</strong></td>
<td>Injected vessels, fornices.</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Iritis</strong></td>
<td>Injected around cornea</td>
<td>Small, fixed, irregular</td>
<td>Normal, KPs</td>
<td>Turgid, deep</td>
<td>Normal</td>
</tr>
<tr>
<td><strong>Acute glaucoma</strong></td>
<td>Entire eye red</td>
<td>Fixed, dilated, oval</td>
<td>Hazy</td>
<td>Shallow</td>
<td>High</td>
</tr>
</tbody>
</table>
Conjunctivitis

- Papillae
- Follicles
- Purulent discharge
- Redness
- Chemosis
Subconjunctival Haemorrhage

- Diffuse or localised area of blood under conjunctiva.
  Asymptomatic
- Idiopathic, trauma, cough, sneezing, aspirin, HT
- Resolves within 10-14 days
Dry Eye Syndrome

• Poor quality
  – Meibomian gland disease, Acne rosacea
  – Lid related
  – Vitamin A deficiency

• Poor quantity
  – KCS
    • Sjogren Syndrome
    • Rheumatoid Arthritis
  – Lacrimal disease ie, Sarcoidosis
  – Paralytic ie, VII CN palsy
Corneal Abrasion

- Surface epithelium sloughed off.
- Stains with fluorescein
- Usually due to trauma
- Pain, FB sensation, tearing, red eye
Corneal Ulcer

- **Infection**
  - Bacterial: Adnexal infection, lid malposition, dry eye, CL
  - Viral: *HSV, HZO*
  - Fungal:
  - Protozoan: *Acanthamoeba* in CL wearer
- **Mechanical or trauma**
- **Chemical:** Alkali injuries are worse than acid
Episcleritis

- **Superficial**
- Idiopathic, collagen vascular disorder (RA)
- Asymptomatic, mild pain
- Self-limiting or topical treatment
Scleritis

- Deep
- Idiopathic
- Collagen vascular disease (RA, AS, SLE, Wegener, PAN)
- Zoster
- Sarcoidosis
- Dull, deep pain wakes patient at night
- Systemic treatment with NSAIDs or Prednisolone if severe
Uveitis

Anterior: acute recurrent and chronic
Posterior: vitritis, retinal vasculitis, retinitis, choroiditis
Panuveitis: anterior and posterior
Anterior uveitis (iritis)

- Photophobia, red eye, decreased vision
- Idiopathic. Commonest
- Associated to systemic disease
  - Seronegative arthropathies: AS, IBD, Psoriatic arthritis, Reiter’s
  - Autoimmune: Sarcoidosis, Behcets
  - Infection: Shingles, Toxoplasmosis, TB, Syphilis, HIV
Ciliary flush

Posterior synechiae

KPs

Fibrin

Flare

Hypopyon
Acute Angle-closure Glaucoma

- Symptoms
  - Pain, headache, nausea-vomiting
  - Redness, photophobia,
  - Reduced vision
  - Haloes around lights

- Corneal oedema
- Ciliary hyperaemia
- Dilated pupil