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THE RED EYE

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Fall, 2008
Causes of Red Eye: Ocular Adnexal Tissues

1. Contact dermatitis
2. Chronic blepharitis
3. Stye
4. Dacryocystitis*
5. Orbital cellulitis*
6. Orbital tumor*

*Dangerous conditions
Contact dermatitis
Chronic Blepharitis
Chronic Blepharitis

Source Undetermined
Chronic Blepharitis
Stye (Hordeolum)
Orbital Cellulitis
Orbital Tumor
Causes of Red Eye: Conjunctiva/Sclera

1. Conjunctivitis**
2. Episcleritis
3. Scleritis*
4. Pinguecula
5. Pterygium
6. Squamous carcinoma*
7. Subconjunctival hemorrhage

* Dangerous conditions
** Dangerous only if bacterial
Bacterial Conjunctivitis

Source Undetermined
Gonococcal Conjunctivitis
Viral Conjunctivitis
Chlamydial Conjunctivitis

Source Undetermined
Allergic Conjunctivitis
Autoimmune Conjunctivitis

Regents of the University of Michigan
Autoimmune Conjunctivitis: Graves’ Disease
Drawing of an eye with diffuse hyperemia of conjunctivitis was removed.
Episcleritis
Scleritis

Source Undetermined
Pinguecula
Pterygium
Subconjunctival Hemorrhage

Source Undetermined
Drawing of an eye with focal, conjunctival hyperemia with a mound was removed.
Causes of Red Eye: Cornea

1. Abrasion

2. Non-traumatic keratopathy* (infection, drying, corneal endothelial dysfunction)

*Dangerous conditions
Corneal Abrasion

Source Undetermined
Corneal Foreign Body
Conjunctival Foreign Body

Source Undetermined
Non-traumatic keratopathy
HERPES SIMPLEX KERATITIS
Herpes simplex keratitis: Typical “dendrite”
Keratitis sicca
Corneal ulcer

Source Undetermined
Causes of Red Eye: Anterior Chamber

1. Uveitis*

2. Angle Closure Glaucoma*

3. Infection (Endophthalmitis)*

*Dangerous Conditions
Anterior uveitis
Posterior synechiae and lens pigment in anterior uveitis
Acute Angle Closure Glaucoma
Endophthalmitis
Drawing of an eye with ciliary flush of corneal/anterior chamber disorders was removed.
<table>
<thead>
<tr>
<th>Condition</th>
<th>Pain</th>
<th>Vision Loss</th>
<th>Discharge</th>
<th>Ciliary Flush</th>
<th>Corneal Haze</th>
<th>Urgency of Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Keratitis</td>
<td>++</td>
<td>++</td>
<td>(+++)</td>
<td>++</td>
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<td>++</td>
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<tr>
<td>Uveitis</td>
<td>++</td>
<td>(+)</td>
<td>−</td>
<td>−</td>
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<td>−</td>
</tr>
<tr>
<td>Acute angle closure glaucoma</td>
<td>+++</td>
<td>++</td>
<td>−</td>
<td>++</td>
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<td>+++</td>
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<tr>
<td>Endophthalmitis</td>
<td>+++</td>
<td>+++</td>
<td>(+++)</td>
<td>(+++)</td>
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</tr>
<tr>
<td>Orbital cellulitis</td>
<td>−</td>
<td>−</td>
<td>(+++)</td>
<td>−</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>Orbital tumor</td>
<td>(++)</td>
<td>(++)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>+</td>
</tr>
<tr>
<td>Bacterial conjunctivitis</td>
<td>(++)</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>−</td>
<td>++</td>
</tr>
</tbody>
</table>
The Red Eye

1. Left lower eyelid red?
   - YES
     - Chronic Blepharitis
     - Stye
     - Chronic Allergic Conjunctivitis
   - NO
     - Subconjunctival hemorrhage, herpes simplex, severe dry eye, or circumcorneal infiltrate ("creamy white")?
     - NO
       - Focal conjunctival lesions?
         - YES
           - Herpes Simplex
           - Atopic Blepharitis
           - Angular Conjunctivitis
         - NO
           - Purulent discharge?
             - YES
               - Conjunctivitis
             - NO
               - Itching?
                 - YES
                   - Atopic Conjunctivitis
                 - NO
                   - Topical allergy medications, corneal or viral pathology?
Additional Source Information
for more information see: http://open.umich.edu/wiki/CitationPolicy

Slide 5 – Source Undetermined
Slide 6 – Source Undetermined
Slide 7 – Source Undetermined
Slide 8 – “Chronic Blepharitis” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/red-eye/blepharitis.html
Slide 9 – Source Undetermined
Slide 10 – “Cross-section of an eyelid” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/anatomy/external-eye.html
Slide 11 – Source Undetermined
Slide 12 – “External anatomy of the eye” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/anatomy/external-eye.html
Slide 13 – Source Undetermined
Slide 14 – “Cross-section of an eye in orbit” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/anatomy/sagittal-section.html
Slide 15 – Source Undetermined
Slide 16 – “Orbital tumor” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/red-eye/orbital-tumor.html
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Slide 19 – Source Undetermined
Slide 20 – Source Undetermined
Slide 21 – “Viral conjunctivitis” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/red-eye/viral-conjunctivitis.html
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Slide 23 – “Allergic conjunctivitis” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/red-eye/allergic-conjunctivitis.html
Slide 24 – “Autoimmune conjunctivitis” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/red-eye/immunologic-conjunctivitis.html
Slide 25 – “Autoimmune conjunctivitis: Graves’ Disease” Regents of the University of Michigan (The Eyes Have It)
http://www.kellogg.umich.edu/theeyeshaveit/acquired/graves-disease.html