The Painful Red Eye: Take Away Points

Presented Nov 27/19 at Fraser Emergency Medicine Grand Rounds by Dr Maryam Aroichane (Opthomology). Summary compiled by Dr. Cimi Achiam

1) If an orbital abscess is associated with significant visual loss or proptosis, emergent abscess drainage by Optho should be considered. Otherwise 48 hours of IV antibiotics are usually favored before operative management is considered
2) Culture bacterial conjunctivitis in all neonates and contact lens wearers, if it is associated with trauma or keratitis, or if it is unresponsive to empiric antibiotic therapy
3) If needed for severe infections, topical fluoroquinolone antibiotics are safe in children >1yr old and have few systemic side effects
4) Never patch contact lens wearers with corneal abrasions as it increases the risk of secondary bacterial infection due to impaired natural defenses and increased warmth and humidity
5) Consider fungal keratitis if there is a history of traumatic corneal injury from vegetable matter, tree branches, or in those sleeping with contact lenses. This usually appears as a corneal infiltrate with feathery borders +/- satellite lesions and is treated with Moxifloxacin drops q1-2 hours + topical antifungal such as Amphotericin B (req compounding)
6) CT orbits is the best imaging modality to rule on an intraocular foreign body if highly suspicious
7) Scleritis vs episcleritis:
    a. 2.5% phenylephrine drops in both eyes- in scleritis vessels won't blanch
    b. Scleritis is usually associated with a decrease in visual acuity, photophobia, looks nodular, doesn't move with a Q-tip, and has an underlying blueish hue
8) Despite some ER literature touting it's safety in limited short term use, ophthalmology is not in favour of sending patients with corneal abrasions home with tetracaine (in any amount)
9) Referral timelines for common ophthalmologic ED presentations
    a. Immediate (ie even at 2 am)
        i. Endophtalmitis esp if post op from cataract surgery or post intravitreous injections
        ii. Intraocular foreign body
        iii. Globe rupture
    b. Should be seen <24h
        i. Retinal detachment (patient should be sent NPO)
        ii. Uveitis
        iii. Keratitis
        iv. Corneal abrasion
        v. Glaucoma
        vi. Scleritis

vii. Acute vision loss
viii. Orbital cellulitis
ix. Gonococcal conjunctivitis
x. Neonatal conjunctivitis

c. Should be seen in 1-3 days
i. Conjunctivitis
ii. Chalazion
iii. Pre-septal cellulitis
iv. Giant cell arteritis
v. Corneal foreign body with rust ring