LRI Emergency Department

Standard Operating Procedure for:

Ophthalmic Emergencies

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Approval date: Approval dates of revised versions:	27/03/2024 29 November 2018
Version: Next Review	5 March 2027
Trust Ref	C80/2016

Refer to the on-call middle grade in Ophthalmology:

Any case of ACUTE LOSS OF VISION

Some specific examples:

1. Orbital Cellulitis. Also request urgent CT scan of the orbit.
2. Painless loss of vision in one eye of less than 6 hours duration
3. Suspected retinal detachment
4. Penetrating eye trauma
5. Corneal ulcer in a contact lens user
6. Acute glaucoma
7. Chemical injuries

Refer to the Eye Emergency Department (EED) for next-day review:

Any eye condition you are unsure about that is not an indication for an urgent referral to the on-call middle grade

Some specific examples:

1. Painless loss of vision in one eye of more than 6 hours duration
2. Chronic loss of vision
3. Acute anterior uveitis and 'floaters'
4. Conjunctivitis not improving after one week
5. Conjunctival foreign bodies that could not be removed in the ED

General Considerations

1. Principal concern is of ACUTE loss of vision. All patients should have their visual acuity checked, and this is an essential measurement for any referral to the on-call ophthalmologist. Cases without loss of vision can be seen in the Eye Emergency Department (EED) the following morning. Cases of chronic loss of vision should be sent back to their GP for an ophthalmology referral.

   (If junior medical ED staff do not know how to do this, they should ask a senior or attend EED to be taught. The same applies for everting the eyelids and basic use of the slit-lamp microscope.)

2. It is important to differentiate between eye discomfort and genuine PAIN. Relatively few eye conditions cause the latter, which should be discussed with the on-call. Cases with discomfort may be seen the following morning in EED.

3. With orbital or periorbital trauma +/- change in visual acuity always consider the possibility of retrobulbar haematoma (blood collection behind the globe of the eye). If suspected, immediately inform the ED senior doctor and oncall Ophthalmology registrar. This needs immediate decompression and a lateral canthotomy kit is kept in the ER stacks.

Common Presentations to ED

Subconjunctival Haemorrhage

May be secondary to trauma, anticoagulation and poorly controlled hypertension, but most frequently idiopathic. No treatment or EED follow up required.

Conjunctivitis

Infectious conjunctivitis is a self limiting condition with or without topical antibiotic therapy. Patients do not need to revisit the hospital for EED even if started on Chloramphenicol / Fucithalmic, unless they are not improving after one week.

Foreign Bodies

Even if there is a patently visible FB, occult FBs are easily missed. Always check for subtarsal FBs by everting the lids. Corneal FBs may be removed with a cotton bud or a hypodermic needle on the slit lamp. If the FB cannot be removed, the patient should return to EED the following morning for this to be performed. Give Chloramphenicol qid in the meantime. Please do not pad the eye.

More Serious Presentations to ED

Corneal Ulcers

Always check for history of FB and contact lens (CL) wear. Any ulcer in a CL wearer should be discussed with the on-call. Most serious ulcers are central in location. Peripheral (marginal) ulcers in elderly patients are relatively benign, cause discomfort rather than pain, and can be seen in EED the following day.

Uveitis

An irregular pupil is a strong diagnostic sign for this; cells may be visible in the anterior chamber although this can be a difficult sign to elicit. Discuss with on-call. Many patients will be recurrent episodes, in which case they can be given a Minim of Cyclopentolate 1% and told to return to EED in the morning.

Penetrating Eye Injuries

Give Chloramphenicol and cover with a plastic eye shield (NOT an eye pad). On-call to see.

Facial Lacerations

Most will not be repaired in emergency theatre overnight and may therefore be seen in EED. Discuss with on-call.

Chemical Injury

If at all possible, ascertain the nature of the chemical. Alkaline injuries are more serious than acid, as they saponify the cell membrane lipid bilayer. Start irrigation with normal saline after checking the pH. Irrigation needs to continue until the pH normalises (i.e. approximately pH 7). When rechecking pH, stop irrigation and wait for at least 5 minutes before inserting pH paper. Contact on-call.

Acute Angle Closure Glaucoma

Severe eye pain and headache, normally accompanied by nausea +/- vomiting. Reduced vision. Contact on-call immediately.

Retinal Detachment / Posterior Vitreous Detachment

Floaters and flashing lights alone with no loss of vision / visual field defect can be seen in the EED the following day. If visual loss reported, ensure visual acuity recorded and inform on-call. Out of hours retinal surgery is not performed at UHL.

Retinal Vascular Disease

Including Retinal Vein Occlusion (RVO), Retinal Artery Occlusion (RAO) and Wet Macular Degeneration. Although all are acute events, none have been proven to respond to acute intervention. If RAO has been present (i.e. symptomatic) for *less than six hours*, anecdotally they may respond to last ditch measures – contact on-call immediately. If RAO duration greater than six hours or RVO / Wet AMD, patient to return to EED next day; no need to contact on-call.

Orbital Cellulitis

Most cases of cellulitis will be periorbital (preseptal). Indicators of genuine orbital cellulitis include proptosis, reduced eye movements and reduced visual acuity (HINT: elevate the swollen eyelid to check the VA properly). Other important features include pyrexia and being systemically unwell. Request urgent CT orbits and inform on-call. In children, 90% of orbital cellulitis is associated within sinus disease.