Eyes in Acute Medicine
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Aims

- Where and how to refer
- What not to miss
  - What is life or sight threatening
- What needs immediate referral
- What needs urgent treatment +/- referral
- What needs routine referral
- What doesn’t need referring/ refer elsewhere
- How to decide
Ophthalmology

- Very high volume service (very young and very old)
- Most number of outpatient attendances at RBH
- Cataract surgery is the commonest operation in NHS (>4000/year at RBH) and need predicted to double in next 20 years
- Macular injections
- RBH 12 consultants - 550,000+ population
Eye Emergencies

Services vary across hospitals:

- 24 hour Eye Emergency Departments
  (Moorfields sees >100,000 / year)
- On call
- Closed out of hours
- PEARs/MECS in community

Seen in:

- Walk in Eye Emergency Departments
- Triaged EEDs or acute clinics
- Within general clinics
Teaching point 1 – where and how to refer

- Find out what your hospital provides
- Where to refer if no out of hours cover
- How to refer (NB EPRs)
- Make friends with your Eye Emergency colleagues
- Don’t send sick patients to the Eye ED
How to refer - History of presenting complaint

▶ Loss of vision
  - complete,
  - partial
  - uni or binocular (NB nasal field loss), blurring, greying, coming and going
History

- **Onset**: sudden, gradual, woke up with, intermittent
- **Pain**: constant / intermittent
  - foreign body sensation, gritty, dry
  - aching, gnawing pain, frontal/brow/temporal
  - keeping awake at night, relieved by analgesia/ drops
History cont.

- **Double vision**: ‘seeing 2 of things’, side by side, vertical or at an angle
  - monocular (still there when close one eye)
  - binocular

- **Headache**: above eye or brow, on waking, temporal

- **Other symptoms**: vomiting, jaw claudication, problems swallowing, muscle weakness
History cont.

- **Past medical history**

- **Drug history** including
  - anticholinergics (pupil dilation) eg tricyclics, antispasmodics, antihistamines, antipsychotics (AACG)
  - topiramate (AACG)
  - Fosamax (iritis)
  - anticoagulants
  - Minocycline (IIH)
  - eye drops

- **Past ophthalmic history** including:
  - recent surgery**
  - previous surgery
  - ongoing treatment / waiting list
  - contact lens wear*
Learning point

**History of intraocular surgery < 2 weeks with pain and decreased vision = intraocular SEPSIS (endophthalmitis)**

**requires IMMEDIATE OPHTHALMIC ATTENTION**
Learning points

- The ophthalmoscope is useful for:
  - pupil reactions
  - red reflex
  - as a magnifier to examine the front of the eye
  - for fundoscopy

- Use local anaesthetic drops to examine if the eye is sore

- Do not be afraid to dilate the pupils with tropicamide 1%

- Describe what you see rather than using unfamiliar terms
Hypermetropia

- Long sighted
- Can’t see well at near without glasses.
- + prescription

Small eyes = risk of angle closure glaucoma
Myopia

- Short sight
- Can’t see in distance without correction
- Minus prescription > 5 = high myopia

- Large eyes = **risk of retinal detachment**
Examine face and eyelids

Herpes zoster ophthalmicus (shingles)

Lagophthalmos in VII n palsy

Lid swelling in allergy/preseptal/orbital cellulitis

Bilateral proptosis in thyroid orbitopathy
Red in fornix - conjunctivitis

Look for distribution of redness

Describe any discharge

Circumlimbal injection – intraocular cause eg iritis

Papillae on upper lid conjunctivia - allergy

Corkscrew vessels in cavernous sinus fistula
Don’t give local anaesthetic or steroid drops to take away

Dendritic ulcer (HSV)     Amoeboid ulcer
Learning point – to dilate or not?

Angle closure glaucoma

- In hypermetropic eyes
- Very unlikely in eyes that have had cataract surgery
- Warn patients who you dilate, about the symptoms
- Eyeball feels hard

**Treat:**
- Lie patient flat on back
- Pilocarpine drops 4%-1% both eyes
- Acetazolamide 500mg iv
- Yag laser peripheral iridotomy
Fundoscopy
Examine disc, macula then periphery if possible

Peripheral vasculitis in SLE

fibrinoplatelet embolus – branch retinal artery occlusion
Learning point

- Retinal detachments are commoner in myopes
- They are rarely operated on out of hours
What not to miss

Life threatening:
- sepsis (cellulitis, cavernous sinus thrombosis)
- III nerve palsy

Sight-threatening:
- Endophthalmitis (immediate referral)
- Giant cell arteritis (treat)
- Central retinal artery occlusion within 4 hours
- Acute angle closure glaucoma - urgent
- Retina detachment - moderately urgent
Urgent referral

- Uveitis
- Flashing lights with floaters – unilateral
- Bilateral disc swelling with no neurological symptoms
- Horner’s?
- Corneal ulcers esp contact lenses wearers
Outpatient Referral

- Symptoms > 2 weeks
- Vein occlusion
- Preproliferative diabetic retinopathy
- Autoimmune diseases without acute vision loss of pain
- Thyroid orbitopathy with no acute vision loss
- Severe dry eye
- VI n palsy
Dry eyes
- use hyaluronic acid-based drops eg Hyloforte, Clinitas Multi); are preservative free
VitAPos ointment more user-friendly than lacrilube
Warm paraffin-based ointments before use
Viscotears toxic to cornea > QDS

Blepharitis
Conjunctivitis
Watery eyes
Refer elsewhere

- Headaches
- Bilateral field loss/ visual disturbance
- Giant cell arteritis with no visual symptoms
Edinburgh red eye algorithm

The accuracy of the Edinburgh Red Eye Diagnostic Algorithm.
Timlin H¹, Butler L¹, Wright M
The accuracy of the Edinburgh visual loss diagnostic algorithm. Goudie C¹, Khan A¹, Lowe C², Wright M¹,²

Figure 1 The Edinburgh Visual Loss Diagnostic Algorithm.
The accuracy of the Edinburgh diplopia diagnostic algorithm

Edinburgh Double vision algorithm


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CN III palsy

CN VI palsy

Internuclear ophthalmoplegia

Restrictive myopathy usually tight inferior rectus

CN IV