

Red Flags

Recent cataract surgery or intravitreal injection in the last 4 weeks

Severe headache +/- vomiting

Pain waking patient up at night

Reduced vision

Contact lens wearer

Preceding trauma
(blunt/high velocity/chemical injury)



RED EYE

Unilateral

Bilateral

Lashes not touching eyeball

Complete eyelid closure

Incomplete eyelid closure

Cornea not staining with fluorescein

Cornea staining with fluorescein

Smaller or same sized pupil in red eye

See 'superficial corneal pathology'

Lashes touching eyeball

Predominantly itchy

Predominantly gritty/burning

Discharge

No discharge

Larger (+/- oval +/- non-reactive pupil) in red eye with pain
+/- blurred vision
+/- headache
+/- nausea

Pain

No pain

Discharge

Severe +/- photophobia

Mild/discomfort only

No discharge

Acute angle closure glaucoma

Endophthalmitis

Uveitis

Scleritis

Episcleritis

Subconjunctival haemorrhage

VII Palsy

Entropion/Trichiasis

Allergic Conjunctivitis

Infective Conjunctivitis

Dry eyes/blepharitis

Acute angle closure/Endophthalmitis/Uveitis with hypopyon
(see pictures):

Refer urgently to ophthalmology

High suspicion for endophthalmitis if recent cataract surgery/intravitreal injection in last 4 weeks

Uveitis w/no hypopyon: Refer same day to ophthalmology

Episcleritis: Will blanch with one drop 10% phenylephrine (check after 10-15 minutes), no blanching in scleritis
Cold compresses +/- topical lubricants +/- PO froben.
Reassurance, self-resolves.
Refer scleritis same day (rheumatology input if known connective tissue disorder)

Check BP, FBC.
Reassure, self-resolves 1-2 weeks. Lubricants for comfort.
GP r/v if no resolution 2-3 weeks inc coagulation screen
If painful/loss of vision consider retrobulbar haemorrhage (!)

Joint care w/medics ?cause
Same day ophthalm referral if fluorescein staining, otherwise routine oculo-plastics referral
PF topical lubricants hourly e.g. sodium HA 0.1-0.2%, hylo-night ointment nocte

Trichiasis: Community management w/lubricants/epilation, refer to clinic if definitive treatment required
Entropion: PF lubricant e.g. hylo-night ointment QDS, hylo-tears 2 hourly. Refer to oculo-plastics clinic

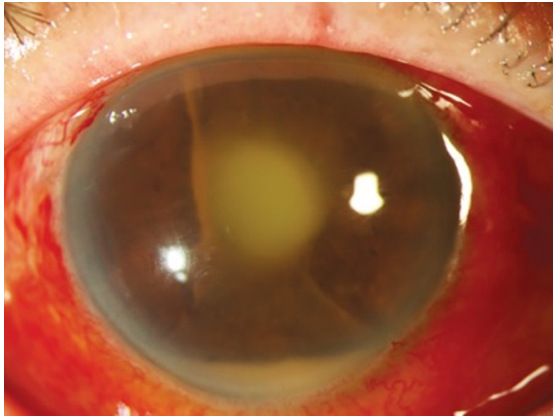
PF lubricants QDS, G.opatanol BD. Allergen advice +/- PO antihistamines e.g. fexofenadine. Refer if persistent/severe.

Bacterial: CPL 1% ointment QDS 7 days. Viral: PF lubricants PRN
Refer to ophthalmology if worsening/no resolution (low threshold in CL wearer)
Consider gonorrhea/chlamydia especially if unilateral and severe (take conjunctival swab)

Lid hygiene (leaflet), PF lubricants
Consider PO doxycycline 100mg OD 3 months for uncontrolled blepharitis

Management

The Red Eye



Hypopyon (endophthalmitis/severe uveitis)



Bacterial conjunctivitis



Entropion



Acute angle closure



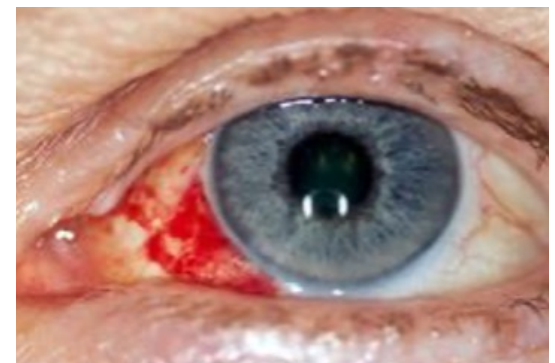
Episcleritis



Allergic conjunctivitis

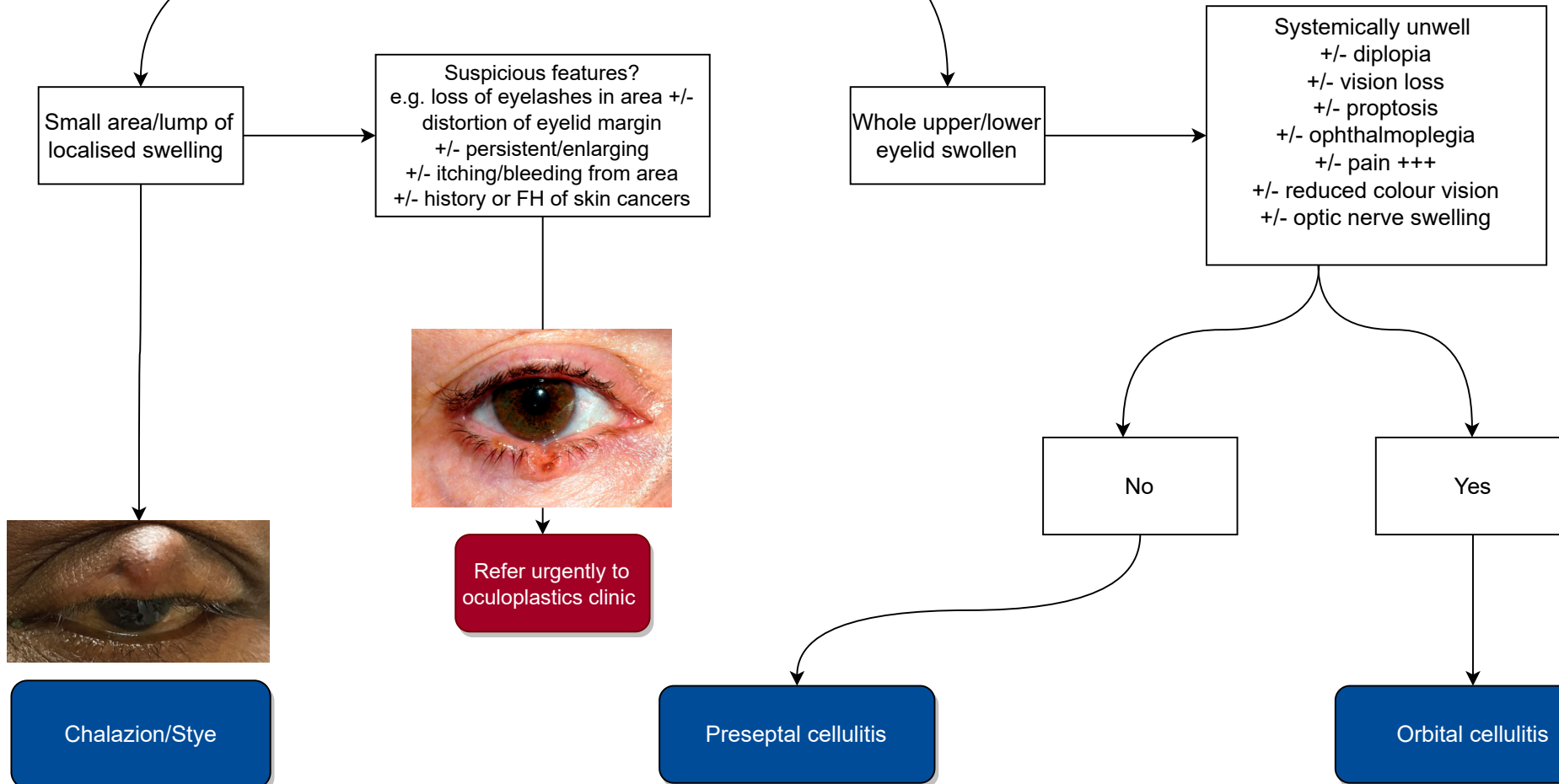


Scleritis



Subconjunctival haemorrhage

EYELID SWELLING



Does not require emergency referral, may be managed in community

Warm compresses/massage: Boil some water and let it cool a little
Soak clean flannel in hot (not boiling) water
Hold flannel against area for 2-3 mins at a time
Gentle massage > warm compress (massage upper eyelid downwards, lower eyelid upwards towards lashes to help expel contents)
If infected (red, warm, tender to touch) consider topical antibiotics e.g. Oc. Chloramphenicol QDS 7 days
May refer to oculoplastics clinic if persistent >6 months to consider minor ops excision

Document visual acuity, colour vision, pupils (presence of RAPD), eye movements, optic nerve assessment, obs including temperature



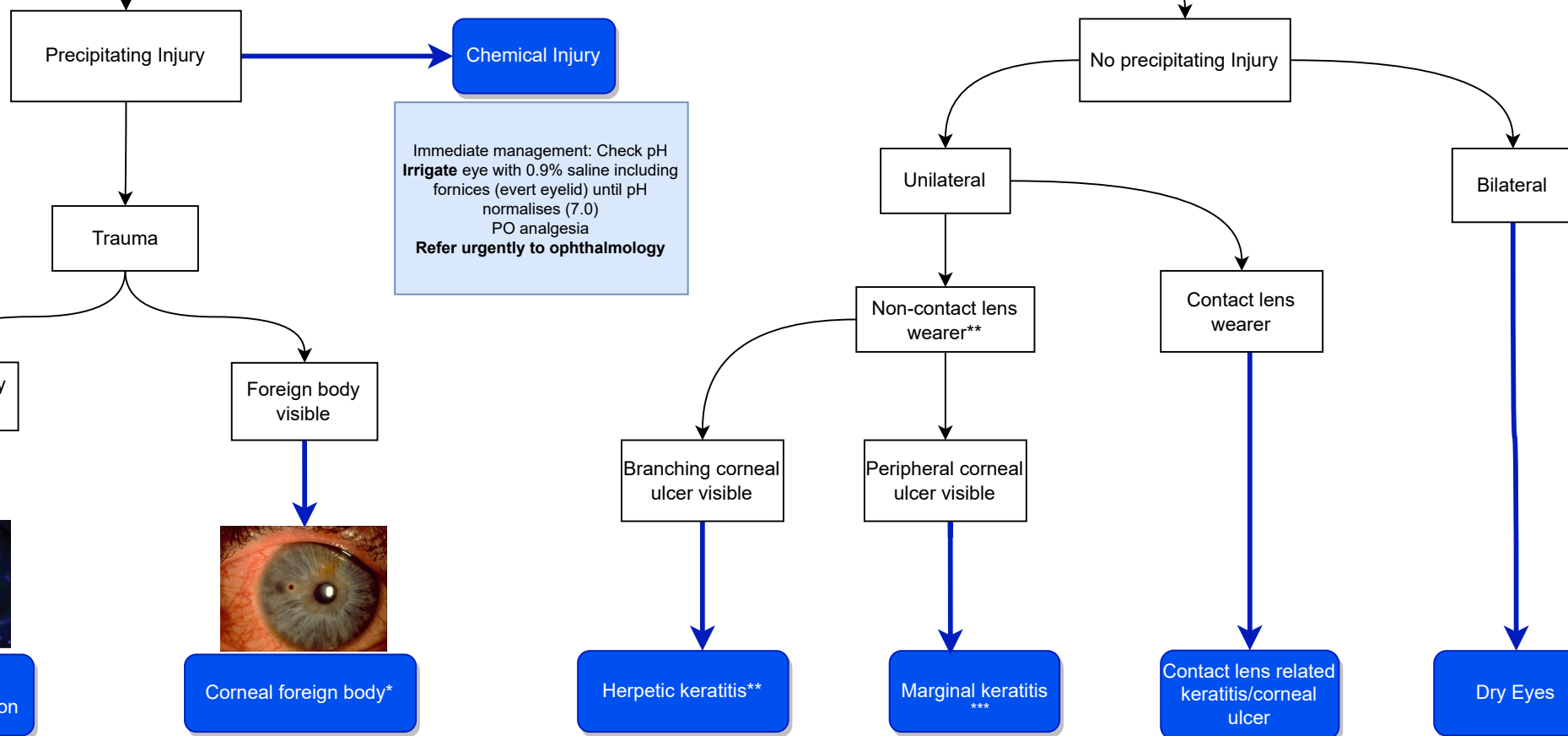
Commence PO antibiotics
e.g. co-amoxiclav 625mg TDS 7 days
/PO clarithromycin 500mg BD 7 days (2nd line)
Advise patient to return immediately if any worsening of symptoms/consider review 24 hours

Emergency: Admit

FBC, U&E, blood cultures if febrile
Conjunctival swab (inc. viral)
Mark extent of cellulitis with skin pen/ photos with eye movements
Immediate IV antibiotics per hospital protocol e.g. IV ceftriazone 2-4g daily
Urgent CT head + orbits
Inpatient ophthalmology/ENT assessment



SUPERFICIAL CORNEAL PATHOLOGY (fluorescein uptake)



Defect seen without fluorescein staining: Likely laceration, refer same day to ophthalmology

Defect only seen with fluorescein staining: Likely corneal abrasion*

Corneal abrasions:
PO analgesia

Non CL wearer: Oc. chloramphenicol 1% QDS 7d days/G.CPL QDS 7 days

CL wearer: G. moxifloxacin QDS 7 days

Please note, recurrent corneal erosion syndrome often presents w/no recall of injury - treat in same way as corneal abrasion, but refer to ophthalmology clinic

Irrigate eye

Apply local anaesthetic eye drops e.g. G. tetracaine/G. proxymetacaine

Focus slit lamp on FB, approach obliquely

Remove carefully with 25G needle

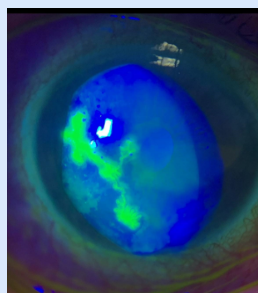
Non CL wearer: Oc. CPL QDS 7 days

CL wearer: G. moxifloxacin QDS 7 days

Refer if unable to remove same day to ophthalmology

****Do not diagnose herpes in a contact lens wearer, refer urgently to ophthalmology**

Suspected herpetic keratitis (branching dendritic ulcer as below)
Refer same day to ophthalmology



If significant pain/reduced vision/corneal thinning/hypopyon refer urgently to ophthalmology

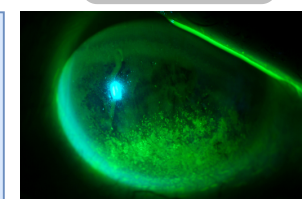
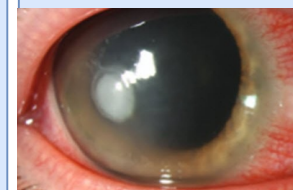
***Suspect marginal keratitis in patients with blepharitis with mild discomfort only

Blepharitis mx: Lid hygiene (leaflet)
G. CPL QDS one week, BD one week. Refer within 48 hours to ophthalmology for consideration of topical steroids



Pain/vision loss/red eye
Corneal ulcer with fluorescein uptake
+/- hazy cornea/hypopyon

Refer urgently to ophthalmology

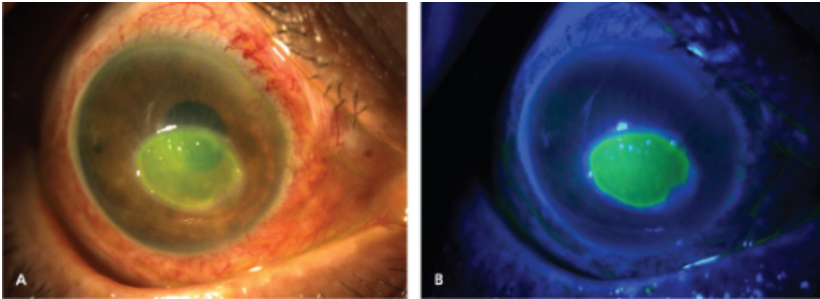


Punctate staining of cornea
PF lubricants e.g. sodium HA 0.1-0.2% (Hylotears, thealoz duo) +/- G.hyo-night nocte

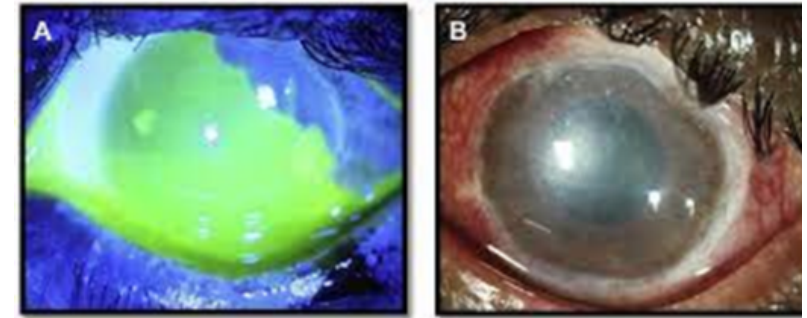
Refer if persistent symptoms on hourly drops + ointment nocte to ophthalmology clinic

***Low threshold for urgent referral if history of penetrating eye injury/high velocity injury/vision loss**

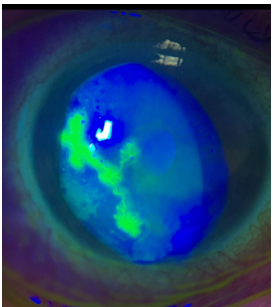
Superficial corneal pathology



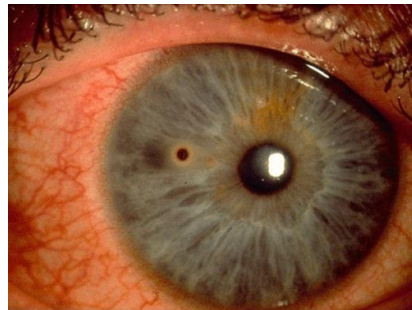
Corneal abrasion (A with normal light, B with blue cobalt filter highlighting fluorescein uptake)



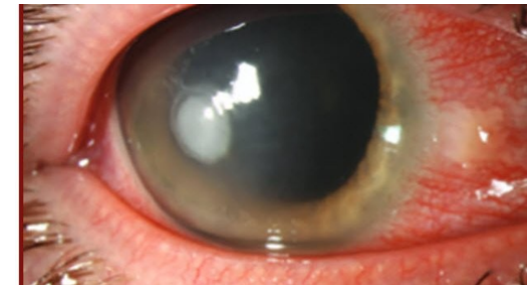
Chemical injury. A. Large epithelial defect staining with fluorescein eye drops.
B. Limbal ischaemia evident by white appearance/blanching, with surrounding hyperaemia



Herpetic (simplex) keratitis, dendritic ulcer
Do not diagnose in contact lens wearers



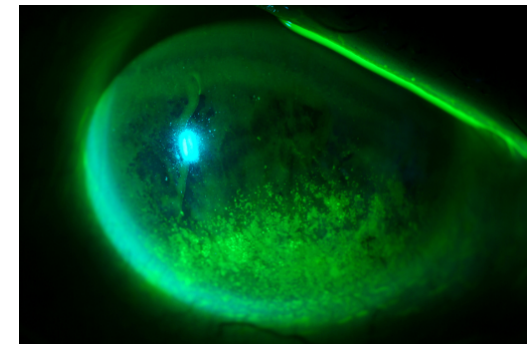
Corneal foreign body



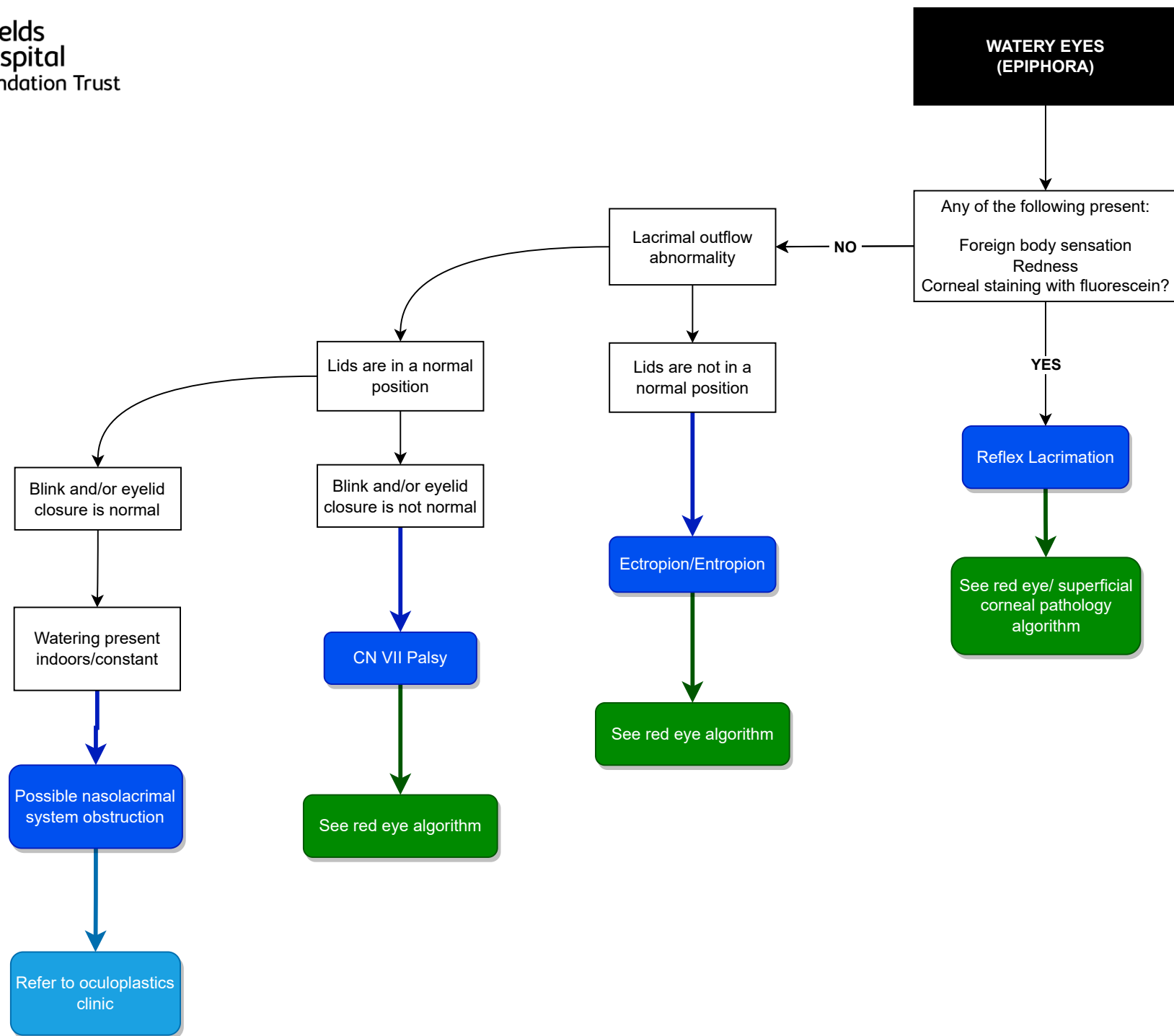
Contact lens related keratitis: Large white corneal ulcer



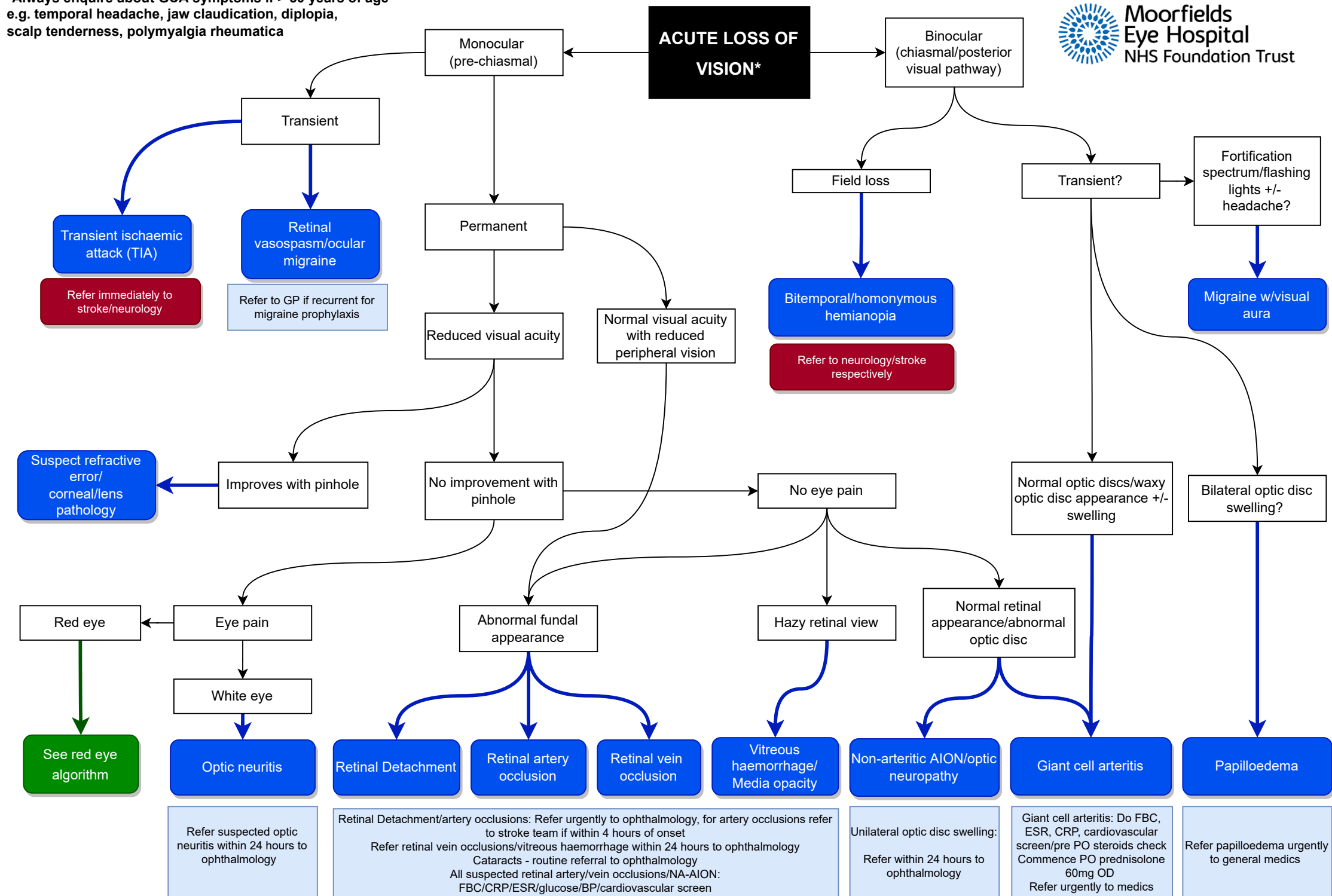
Marginal keratitis: Small white peripheral corneal ulcer. (Do not diagnose in lens wearers)



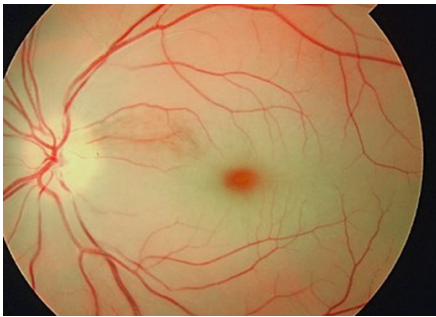
Dry eyes: Punctate staining of inferior cornea



***Always enquire about GCA symptoms if > 50 years of age**
e.g. temporal headache, jaw claudication, diplopia,
scalp tenderness, polymyalgia rheumatica



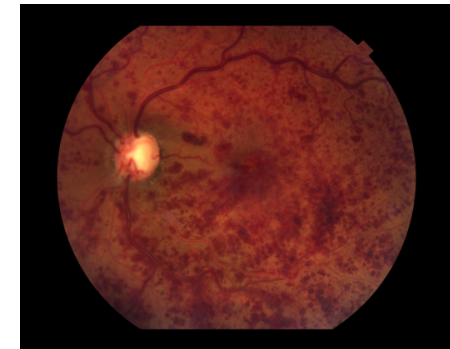
Acute Loss of Vision



Central retinal artery occlusion
(Cherry red spot at macula, pale retina
, attenuation of arterioles)



Branch retinal artery occlusion



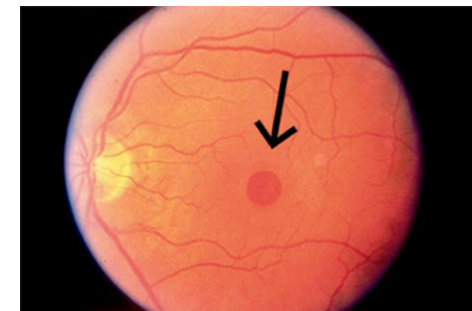
Central retinal vein occlusion
Haemorrhages all 4 quadrants, tortuous
vessels
+/- optic disc swelling



GCA: Optic disc swelling with waxy pallor



Branch retinal vein occlusion
inferotemporal quadrant



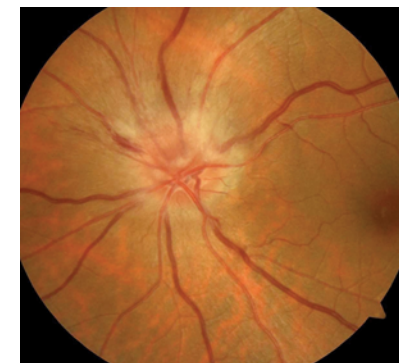
Macula hole (refer to ophthalmology
vitreo-retinal clinic)



Normal optic disc e.g. in optic neuritis



Optic disc swelling with multiple flame
haemorrhages
If bilateral: always treat as PAPPILLOEDEMA



Optic disc swelling e.g. NA-AION,
optic neuropathy (usually unilateral)

References:

Guidelines adapted from:

- 1) Timlin, H., Butler, L. & Wright, M. The accuracy of the Edinburgh Red Eye Diagnostic Algorithm. *Eye* **29**, 619–624 (2015)
- 2) Barts Health NHS Trust Ophthalmology Guidelines
- 3) Moorfields Eye Hospital NHS Foundation Trust Emergency Guidelines App 21/7/21

