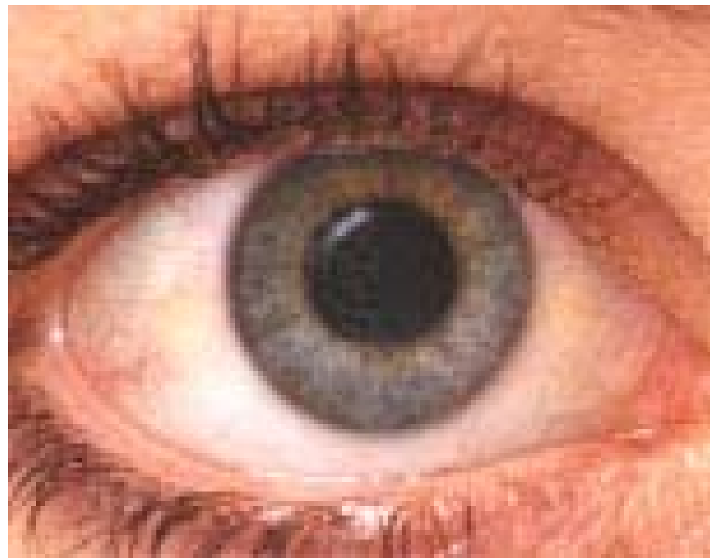
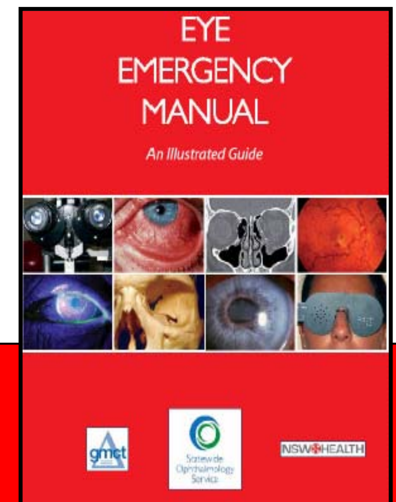
Education Session Four

Triage and Ocular History





EYE EDUCATION FOR EMERGENCY CLINICIANS

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NSW HEALTH

Modules originally designed for emergency nurses as a component of the Eye Emergency Manual Project.

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Aim:

To provide an overview of ocular triage and ocular history taking

Objectives:

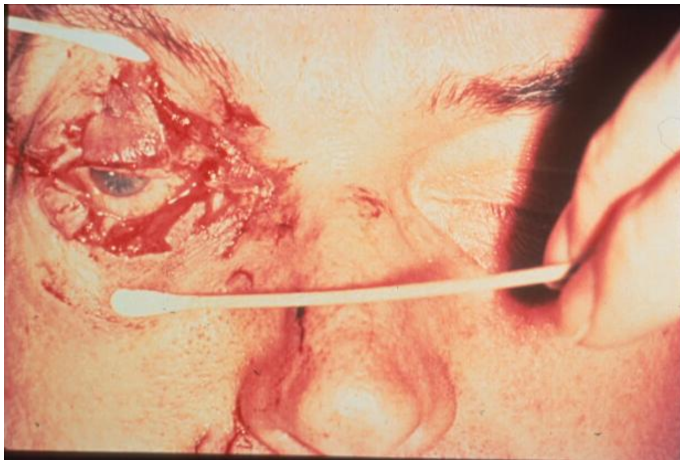
On completion of this session you will be able to:

- define the appropriate triage categories for ocular conditions
- ensure that patients are treated according to their clinical urgency
- document an effective ophthalmic history

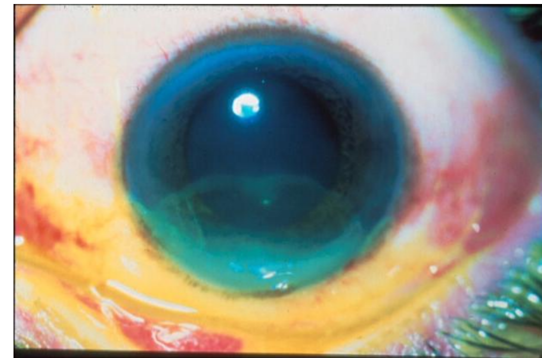
This presentation is only focused on ocular emergency presentations

“the majority of (eye injuries) are superficial in nature and transient in their effects, but place considerable demands on A & E services”

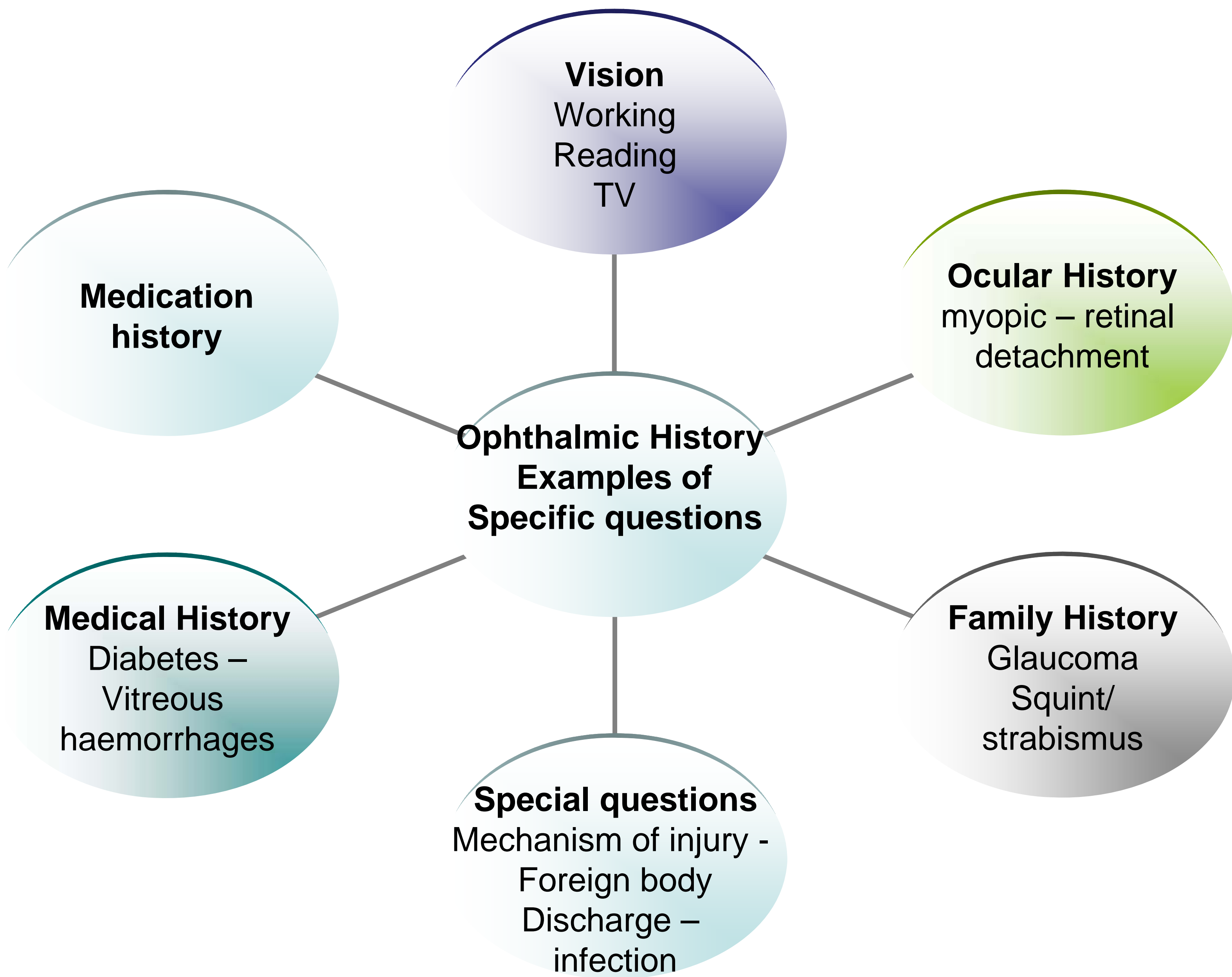
(MacEwan 1989)



Full thickness lid laceration
Triage 2



Corneal abrasion
Triage 4


Vision
Working
Reading
TV
Medication history
Ocular History
myopic – retinal detachment
Ophthalmic History
Examples of
Specific questions
Medical History
Diabetes –
Vitreous
haemorrhages
Family History
Glaucoma
Squint/
strabismus
Special questions
Mechanism of injury -
Foreign body
Discharge –
infection

On Presentation to Emergency

There are two important procedures for triage to perform at the same time:

1. **Eye Examination** – refer to Education Session Two & Three for the process of Eye Examination and Visual Acuity.

2. **History Taking**

Both of these will enable you to allocate patient's appropriate triage category, and facilitate timely treatment

Overview of Patient History

- Identify Presenting Problem
- Patients Previous Ocular History
- Family Ocular History
- General Health

If patient is a poor historian, culturally and linguistically diverse (CALD), or has difficulty comprehending the questions - base triage category on eye examination and visual acuity.

Overview of Patient History

Plus EYE EXAMINATION:

- Provides more clues to fit provisional diagnosis
- Provides evidence to refute it

If the patient has one ‘good’ eye only and presents with symptoms in the good eye, referral to an ophthalmologist for review is required.

Presenting Problem

- Record primary reason for visit – what is the presenting problem? What prompted the visit?
- Has something new happened, or have symptoms been ongoing for sometime? Why is patient now worried?

Caution: some patients may include new symptoms to legitimise the presentation.

Presenting Problem (cont)

- First series of questions:
  - Visual acuity – was the change sudden or gradual, partial or total loss
  - Affecting one or both eyes
  - Current form of correction – is presenting problem contact lens related?
  - Blurry or double vision
  - Red/sore/itchy eye
  - Flashes and floaters/ headaches
  - Recent eye surgery or trauma

Patient's Ocular History

- **Pre injury vision** – has the eye always had reduced vision? i.e. 'lazy eye'
- **Ocular surgery** - predispose to infection, wound dehiscence, Intraocular lens (IOL) displacement – sudden drop in visual acuity
- **Previous ocular trauma** – Airbag related (may get flashes/floaters months later)
- **Use of eye drops** – how often, when last used, how long has the bottle been open

Patient's Ocular History (cont)

- **Conditions affecting the other eye.**
- **Previous use of contact lenses** – check for overwear (using daily wear contact lens for 2 - 3 days instead of 1), using correct contact lens solution (not saliva to clean)
- **Ask if they have had corrective/refractive eye surgery** (when was their last follow up and when is their next follow up), be aware of people having eye surgery overseas, may not have arranged ocular follow up

General Health

- **Systemic conditions** – especially vascular, inflammatory
- **Medications** - (anticoagulants), include all herbal supplements, vitamins, anti malarial
- **Allergies** – can have bearing on allergic eye conditions i.e. lanolin can be used as a base in eye ointments
- **Tetanus immunization status** - (if eye trauma)
- **If c/o headaches** – is there a history of migraine, visual aura's?
- **Recent overseas trips** – purulent discharge = ? sexually transmitted infections (STIs)

Thinking Points
-when taking an ocular history

- Ask what the eye symptoms are, when first noticed, and what were they doing immediately beforehand (particularly if the onset was sudden)
- If eye scratched- what, when and force used
- If possible, test visual acuity at this stage
  - only excluded if serious life threatening condition or
  - chemical injury
- If chemical injury ask what chemical, time and previous first aid

Start irrigation NOW! DON'T WAIT

(Thinking points are adapted from Field & Tillotson 2008)

Thinking Points
-when taking an ocular history (cont)

- Record if patient has history of doing any dangerous work. Occupation may give clue to eye problem – jack hammering, use of power tools (anything high velocity), ask about use of eye protection
  - Think of corneal foreign body, intraocular foreign body and corneal abrasion.
- Have they been playing sport.
  - golf, squash & tennis balls fit perfectly in orbit – porential ruptured globe or fractured orbit

Thinking Points

-when taking an ocular history (cont)

- Document pain level and type – try to be accurate, use pain scale, ask detailed questions about exact type, location

  If analgesia has been taken, was it effective? Try to discriminate between soreness, irritation and stinging– look out for photophobia (sensitivity to light), deep pain in and around eye, severe pain, nausea and vomiting – consider acute glaucoma

- Ask about family history of eye problems. Some eye conditions can are inherited – Cataracts, Glaucoma, Retinal / Corneal Dystrophies and Retinal Detachment

Thinking Points

-when taking an ocular history (cont)

- Ask about any previous eye problems. Especially if history of poor vision in one eye since birth/childhood, or possible reoccurrence of previous eye disease – inflammatory (uveitis), recent corrective eye laser (refractive surgery), high myopes (short sighted), retinal holes/detachment

- Has there been any recent illness? An upper respiratory tract infection may indicate viral eye conditions

Thinking Points

-when taking an ocular history (cont)

- Age may be factor, some eye problems affect particular age groups:- circulatory problems may affect macular and cause degeneration; age related cataracts (gradual reduction of vision, glare); glaucoma (halos around lights, loss of peripheral vision)

- Check medications – these can further clarify presenting eye problem i.e. hypertension, diabetes and cardiac conditions may be associated with some vascular eye conditions:- central retinal artery occlusion; diabetic retinopathy

Suggested Triage Category

Based on Australian Triage Scale

Triage 1

- Immediate Life Threatening Condition

A patient should be allocated a higher triage category if discriminator in that category cannot be ruled out.

Australian College of Emergency Medicine. (2000). *The Australian Triage Scale*. Carlton Vic. Publisher

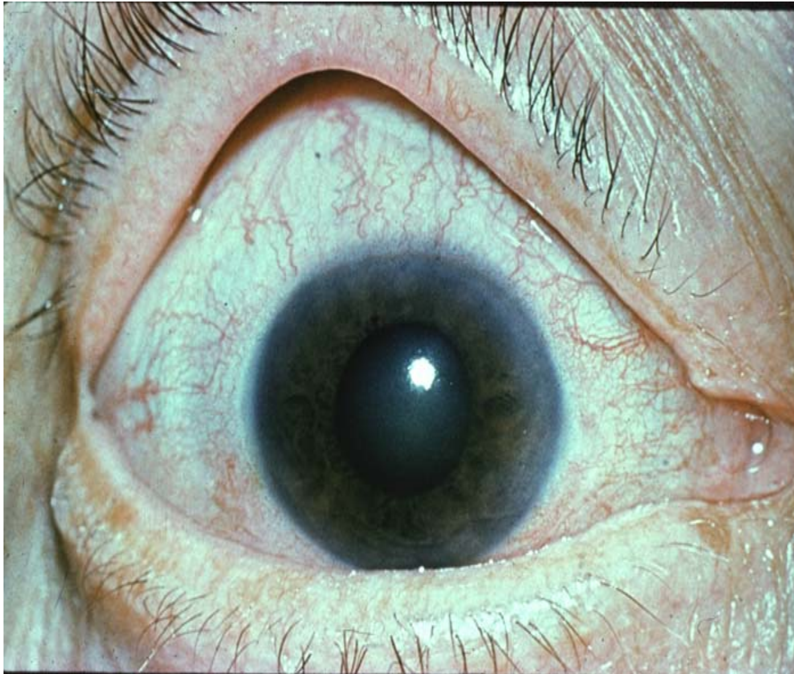
Triage Category 2

Assessment and treatment within 10 mins

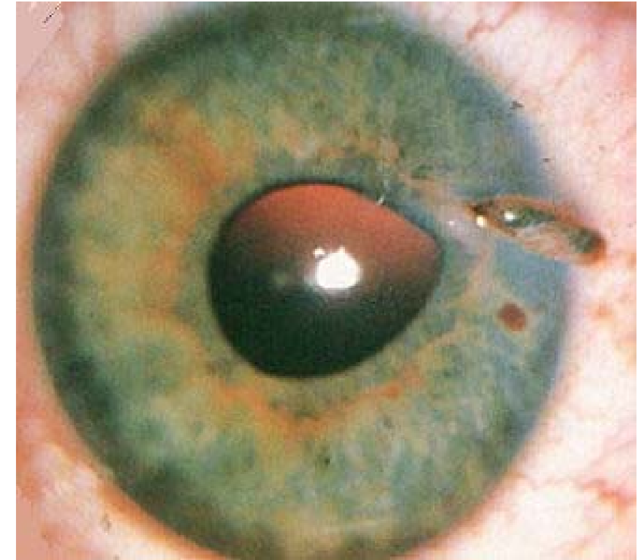
potential threat to eye function or deteriorating visual conditions.

- **Chemical Burns** (acid or alkali) needs immediate action by nurse- **Start irrigation NOW! DON'T WAIT.**
- **Penetrating eye injury** (PEI) – if self evident don't touch except apply shield if appropriate
- **Sudden vision loss** – central retinal artery occlusion, (<6/60)
- **Severe eye pain** – possible acute glaucoma

Triage Category 2



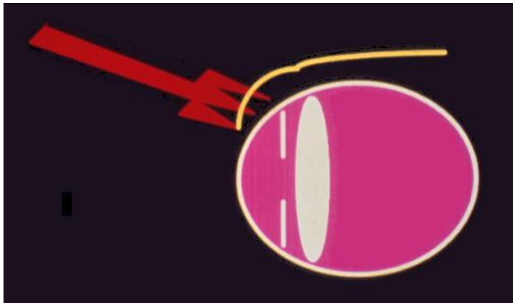
Acute Glaucoma – semi dilated pupil
Red eye, cloudy cornea, painful

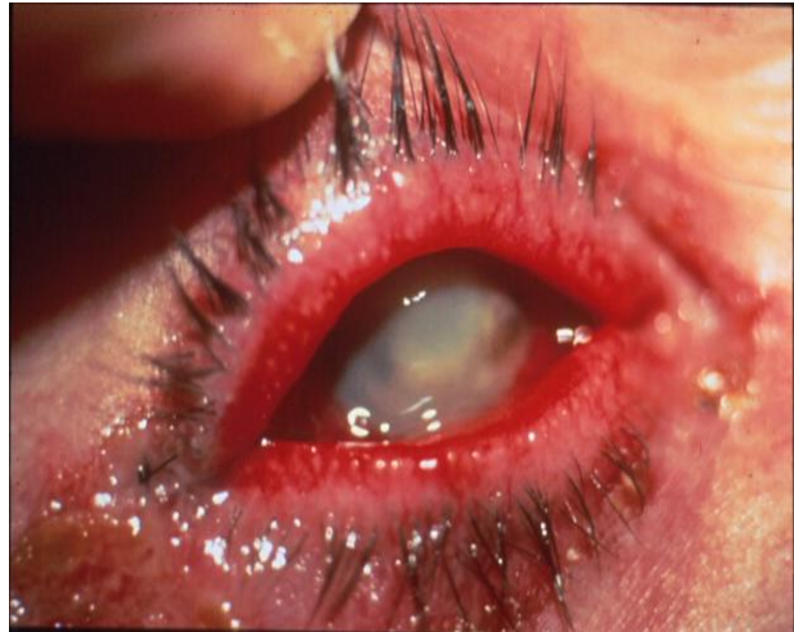


Penetrating Eye Injury –
With iris prolapse

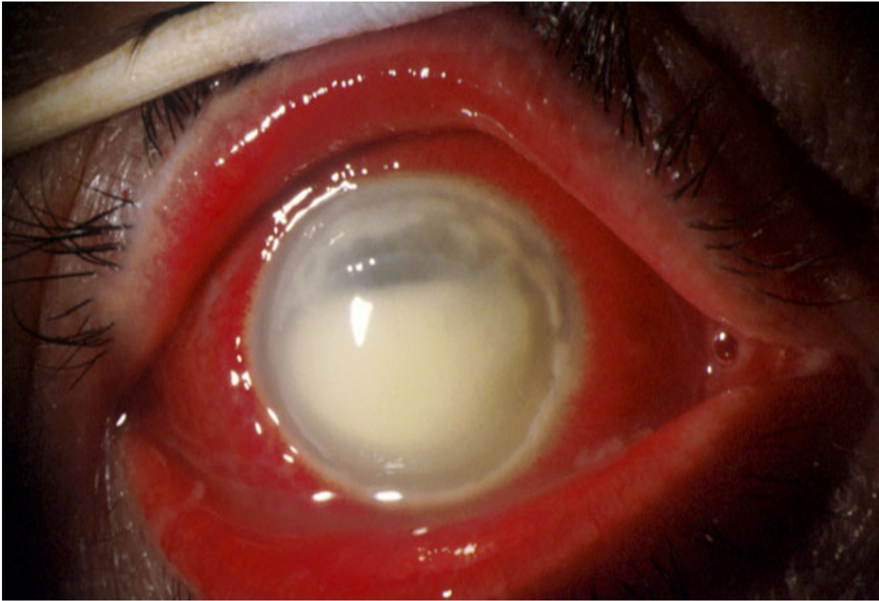
Triage Category 2

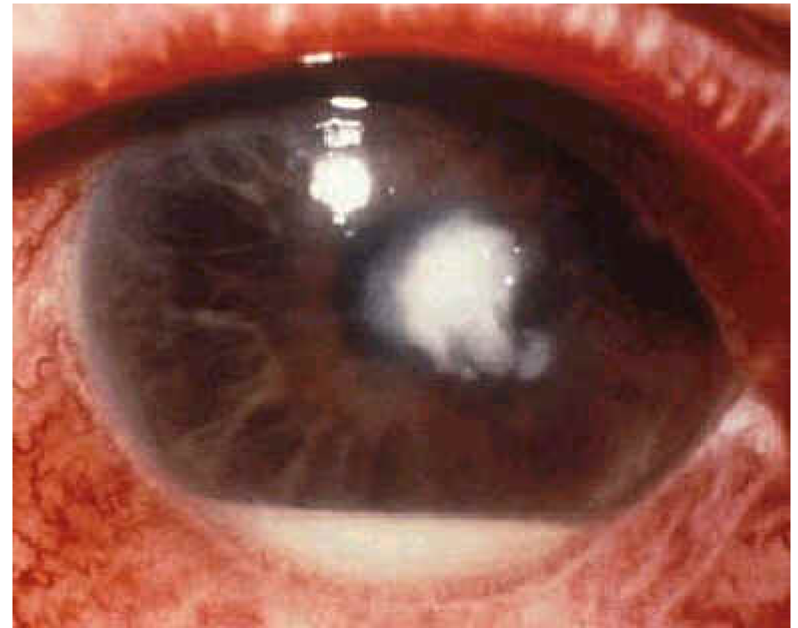
- **Lid punctures - 3 days after being poked with fork - endophthalmitis**





Triage Category 2 & 3





Triage category 2
Alkali Burn

Triage category 3
Hypopyon, central corneal scar

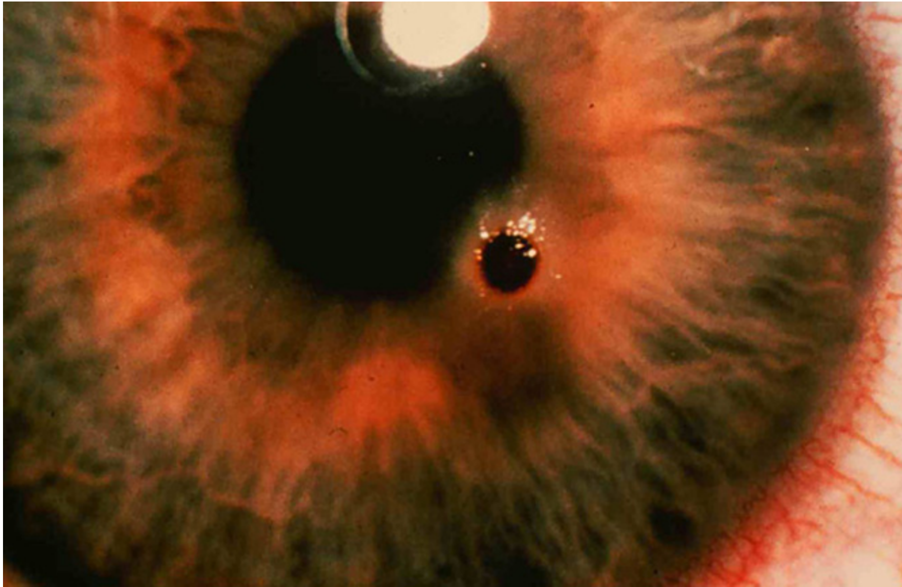
Triage Category 3

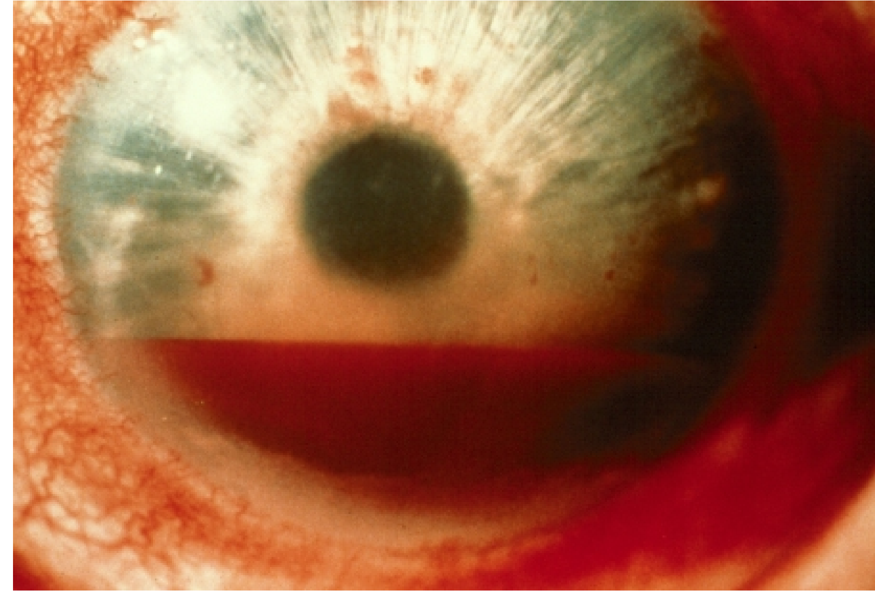
Assessment and treatment within 30 minutes.

Potential for adverse outcome, or relief of severe discomfort/distress.

- **Painless loss of vision** – central retinal vein occlusion
- **History which indicates penetrating eye injury** (PEI)
- **Hypopyon** – pus in front chamber of eye
- **Hyphaema (total)** – blood in front chamber of eye

Triage Category 3 & 4





Triage category 4
Foreign body – metal

Triage category 3
Hyphaema

Triage Category 4

Assessment and treatment start within 60 minutes

There is a potential for an adverse outcome, or severe discomfort and distress.

- **Foreign body** – non penetrating
- **Painful red eye**
- **Flash burn** (welder flash) – often the pain is delayed
- **Sudden increase in numbers of floaters**, especially with previous retinal history - Retinal detachment
- **Flashes** - Retinal detachment, especially if previous retinal history
- **Small hyphaema** - blood in front chamber of eye

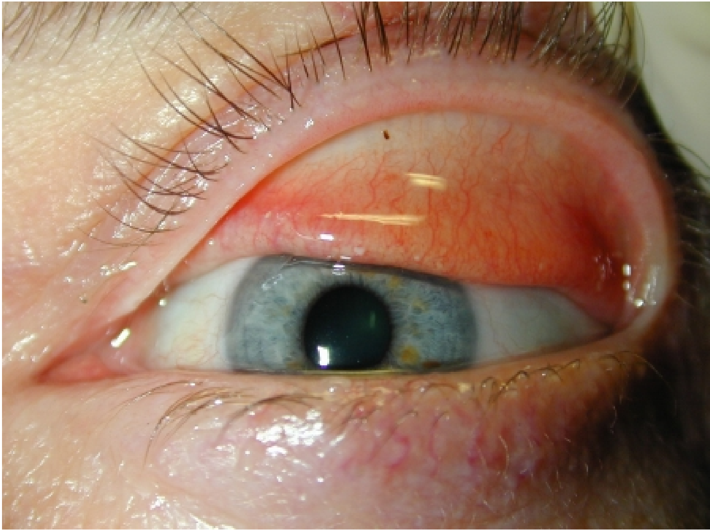
Triage Category 5

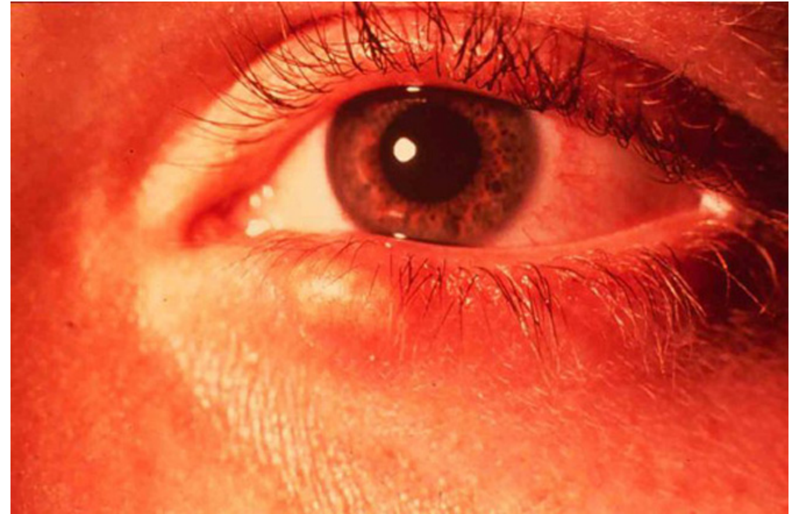
Assessment and treatment within 2 hours

Less urgent – condition is chronic or minor, clinical outcome will not be affected by delay in treatment.

- **Conjunctivitis**
- **Blepharitis**
- **Chalazion**
- **Dry eyes**
- **Long term history of floaters** (with no previous retinal history)
- **Subtarsal foreign bodies** – no eye redness.

Triage Category 5



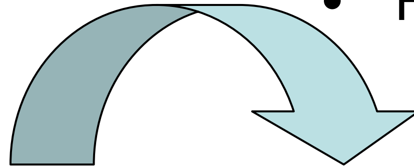


Subtarsal Foreign Body

Chalazion

Documentation

- Identification
  - Name, Address, DOB
  - Date of arrival/time
  - Name of relatives with child



- History
  - **When, where, and how the injury occurred**
  - **Ocular symptoms caused by the injury**
  - **First Aid treatment given**
  - **Previous ocular disorders and their effect on vision**
  - **Whether glasses, contact lenses or protective eye wear was worn**
  - **Tetanus status**

- Examination
  - Examination of both eyes
- Management
  - Investigations
  - Treatment
  - Follow-up arrangements

Cheng, H. 1997, *Emergency Ophthalmology*, BMJ Publishing Group, London, pg 133.

Summary

- Reiterate a summary of presenting problems to check for misunderstandings
- If possible perform and document a visual acuity and eye examination as soon as possible – this may help in the assessment
- Use clinical judgement based on clinical presentation, the information presented is a guide only

Differential Diagnosis of the Red Eyes – Appendix 1

	Conjunctivitis	Iritis	Acute Glaucoma	Keratitis (foreign body abrasion)
Discharge	**MARKED**	None	None	Slight or none
Photophobia	None	**MARKED**	Slight	Slight
Pain	None	Slight to marked	**MARKED**	**MARKED**
Visual Acuity	Normal	Reduced	Reduced	Varies with site of the lesion
Pupil	Normal	**SMALLER or same**	**LARGE OVAL and FIXED**	Same or SMALLER

Conjunctivitis – Appendix 2

	Bacterial	Viral (usually adenoviral)	Allergic
Symptoms	Redness, FB sensation, Itching is less Irritating Superficially sore	Itching, Burning, FB sensation Can have recent URTI Starts one eye Within 2days fellow eye affected	Itchy, Watery discharge, History of allergies
Signs	• Purulent discharge • Chemosis • <u>Caution:</u> Gonococcal Conjunctivitis (sudden onset 12 – 24 hrs)	Conjunctival follicles Palpable preauricular lymph nodes, Watery mucus discharge Red oedematous eyelids,	Chemosis, Red oedematous eyelids
Treatment	• Antibiotics – cultural sensitivity • Lid hygiene • Highly contagious – stress importance of personal hygiene – to avoid cross infection	• Lubricants • Cold compresses • Antibiotics if required • Highly contagious • Personal hygiene	• Compresses – cold • Lubricants without preservatives • Remove pathogen if known

References

Australian College of Emergency Medicine. (2000). *The Australian Triage Scale*. Carlton Vic. Publisher

Cheng, H. 1997, *Emergency Ophthalmology*, BMJ Publishing Group, London.

Field.D,. & Tillotson.J., (2008) *Eye Emergencies – The practitioner's guide*, M & K

Marsden.J. (2006) *Ophthalmic Care*, Wiley

MacEwan. 1989