Clinical Practice Guidelines: Trauma/Eye injury

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Date	July, 2022
Purpose	To ensure a consistent appproach to the management of a patient with an eye injury.
Scope	Applies to Queensland Ambulance Service (QAS) clinical staff.
Health care setting	Pre-hospital assessment and treatment.
Population	Applies to all ages unless stated otherwise.
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Eye injury

July, 2022

Eye injuries are common and may be serious despite a benign appearance.

All patients with suspected eye trauma and patients who have an ALOC should have their eyes assessed and basic eye protection precautions implemented.

General management principles include:

- Irrigation with water or saline for chemical or biological fluid exposure, foreign body or thermal burns
- Protect eye with shield (cardboard cone or styrofoam cup)
- Antiemetic
- Position patient head up

Clinical features

- Significant eye injury may be present, despite normal vision and minimal symptoms.[1]
- If eyelid oedema makes opening of the lids difficult – attempt gentle assessment and document findings.
- General symptoms:
  - pain or sensation of 'grittiness' in the eye
  - redness
  - copious tears
  - spasm of the eyelid
  - impaired or double vision
  - photophobia
  - haemorrhage
  - fluid loss from the eye [2]
- Chemical exposure:
  - sensation of foreign body within the eye
  - pain
  - blurred vision, tears
  - redness

Clinical features *(cont.)*

- Penetrating eye injury:[3]
  - abnormally shaped or collapsed globe
  - obvious laceration or presence of prolapsed tissue
  - hyphema
- Blunt eye injury:[3]
  - orbital injury
  - traumatic mydriasis
  - hyphema
  - occasionally detachment
- Retinal detachment:[1]
  - can occur spontaneously or months after an injury
  - history of light flashes
  - presence of floating black specks
  - curtain-like narrowing of peripheral vision
- Flash burns:[2]
  - history of unprotected exposure to welding flash or sun lamp
  - pain develops several hours following exposure
  - foreign body sensation within the eyes
  - redness and photophobia

Risk assessment

- Nil in this setting

Additional information

- With most eye injuries the priority is initial stabilisation of the patient, protection of the eye and transport to an appropriate facility (preferably one with an ophthalmologist).
- If possible, patients with eye injuries should have a visual acuity test completed:[3]
  - Test one eye at a time.
  - Initially test the patient's ability to count fingers (question patient on clarity of vision).
  - Should the patient be unable to complete this, test for hand motion, or light perception.
- Do not delay initial treatment to perform visual acuity test.

Additional information *(cont.)*

- Administration of an antiemetic following penetrating or blunt eye injury is highly recommended. Vomiting significantly increases intraocular pressure and should be avoided.
  - It is recommended that ondansetron is used in these circumstances especially if opioid pain relief is given.
  - It is highly recommended that medications such as maxolon are avoided, due to the risk of dystonic reactions occurring and perpetuating the injury
- Routine padding of eyes is no longer recommended. If padding is used, it must not place pressure on the globe. Do not pad an eye with a penetrating injury.
- Patients transported by air may have special requirements. Consult with receiving facility or RSQ as to flight restrictions.
- When flushing eyes, place injured/damaged eye down and flush from medial aspect.
- Eye injuries associated with capsicum spray should be irrigated until pain subsides.
- Preferred positioning for patients with eye injuries is supine with head elevated.