

H04: Eye Injuries

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Introduction

Eye trauma can result from wide-ranging causes such as direct eye injury or chemical exposure. These can be life-altering events for patients. Any patient with an eyesight-threatening injury should be transported promptly for specialist assessment. Treatment for eye injuries is centered around recognition of the mechanism of injury, the provision of supportive care, and rapid transport.

Patients may present with minor symptoms yet still be experiencing injuries with potential long-term consequences.

Prehospital care is centered on recognizing the mechanism of injury, providing supportive care and rapidly transporting in the case of eyesight threatening trauma. Patients with minor symptoms may still be experiencing injuries with long-term consequences that may not be apparent during prehospital assessment.

Essentials

- In cases of direct eye trauma, cover both eyes and keep the patient at rest
- Remove contact lenses if present and not adhering to the cornea
- If condition permits, elevate the patient's head during transport
- Avoid placing pressure on the eye globe while packaging and transferring the patient
- In cases of chemical exposure, begin irrigation with normal saline while attempting to identify the substance. Bring relevant documentation (e.g., MSDS sheet) with the patient to hospital. Contact ClinCall for support in managing chemical exposures.
- Provide analgesia and antiemetics as required

Additional Treatment Information

- Maintain a high index of suspicion for other injuries in the case of direct trauma including head & spinal injury as well as facial fractures
- Vomiting increases intraocular pressure so early administration of anti-emetics is beneficial
- Penetrating objects should be left in place and should be stabilized as appropriate
- If condition allows, assess visual acuity in each eye
- Do not delay treatment or transport to assess visual acuity

Referral Information

All patients with ocular trauma should be transported for specialist assessment.

General Information

- If available, an injured eye should be covered with a rigid shield.
- Patients with eye injuries associated with other facial fractures may have specific considerations for air transport if they are being transferred. Associated sinus fractures may result in complications such as pneumocephalus and may present complications when changes in atmospheric pressure occur. Contact ClinCall for guidance if the patient is undergoing air transport as part of care.

Interventions

First Responder

- Keep patient at rest

- Identify source of ocular injury (and chemical substance if appropriate)
- Initiate irrigation with normal saline for chemical injury or other injuries associated with contamination of the eye
 - → [PR05: Patient Decontamination](#)

Emergency Medical Responder – All FR interventions, plus:

- Cover both eyes with a rigid shield if available and clinically indicated
- Transport patient with head elevated if condition allows
- Administer analgesia:
 - → [E08: Pain Management](#)
 - [Nitrous oxide](#)

Primary Care Paramedic – All FR and EMR interventions, plus:

- Treat or prevent nausea and vomiting:
 - [DimenhyDRINATE](#)
- Provide analgesia:
 - [Ibuprofen](#)
 - [Acetaminophen](#)
 - [KetAMINE](#)

Advanced Care Paramedic – All FR, EMR, and PCP interventions, plus:

- Provide analgesia:
 - [FentaNYL](#)
 - [KetAMINE](#)
- Treat or prevent nausea and vomiting:

Evidence Based Practice

[Ocular Trauma](#)

References

1. Alberta Health Services. AHS Medical Control Protocols: Adult Eye Injury Management. 2020. [\[Link\]](#)
2. Ambulance Victoria. Clinical Practice Guidelines: Ambulance and MICA Paramedics. 2018. [\[Link\]](#)

