Prepare

- Administer appropriate topical anaesthetic eye drops to facilitate irrigation and examination\(^1,2,3\)
- Remove any exudate, particulate matter, debris and scabs from the eye\(^4\)
- Remove contact lenses, if able\(^4\)
- Check corneal pH (mean pH of tears is 7.6)\(^5\)

First Aid

**Do not delay immediate irrigation of the eye for detailed assessment of patient or acquiring a particular irrigation fluid, regardless of delay in presentation**\(^6,7,8\)

- Commence urgent irrigation with a sterile isotonic solution (e.g. Hartmann's or Normal Saline), an amphoteric solution (Diphoterine\(^\text{®}\)), or water.\(^6,9,10,11,12,13\)
- Irrigate for as long as practically safe and possible. Keep patient warm to prevent hypothermia (children and elderly are most susceptible).\(^6,14\)
- Keep unaffected eye uppermost to avoid cross contamination\(^15\)
- Flush from the inside corner to the outside. Use a Morgan lens or the end of IV tubing to direct the sterile solution across the eye.\(^9,16\)
- Rinse the eye and the deep fornices thoroughly. If possible, evert the eyelids.\(^9,15\)
- In chemical injuries, repeat the pH test soon after the irrigation has ceased and again 30 minutes later\(^9\)

Assess

- Re-apply topical anaesthetic if needed to allow for adequate assessment\(^15\)
- Examine the lids and face for chemical or thermal burns\(^6\)
- Exclude any ocular, intraocular, or intraorbital foreign body or chemical\(^4,17\)
- Fluorescein corneal staining\(^17,18\)
- Clouding of the cornea and perilimbal blanching
- Visual acuity examination (with ophthalmology input)
- Intraocular pressure (with ophthalmology input)

Treat

- Check Tetanus immunisation status\(^16\)
- Trim singed or scorched eyelashes\(^4\)
- Apply chloramphenicol ointment to burnt eyelids and ocular surface to reduce the risk of infection\(^16,17\)
- Sit patient upright to reduce facial and eyelid oedema\(^19\)
- Discuss with the local Ophthalmology and Burns Service

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References


