FIRST AID
PART 3 – FIRST AID TREATMENT OF EYE INJURIES

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Eye injuries are irritating and painful, and some have the potential to be very serious. Even a superficial graze to the cornea can lead to scarring, resulting in permanent damage and deterioration in vision. Prompt first-aid treatment can be helpful.

The aim of this practical procedure is to understand the first-aid treatment of eye injuries.

PROFESSIONAL RESPONSIBILITIES
This procedure should be undertaken only after approved training, supervised practice and competency assessment, and carried out in accordance with local policies and protocols.

INJURY
Foreign body in the eye
A foreign body in the eye, such as a speck of dust, grit or an eyelash can be extremely irritating. Most are found in the conjunctival sac or on the cornea. They are usually superficial and easily removed but treatment will depend on whether the foreign body is loose or adherent (Khaw et al, 2004).

Chemical injury
A chemical injury to the eye could cause blindness. Signs and symptoms include:
- Severe pain in the eye;
- Redness and swelling around the eye;
- Inability to open the eye;
- Copious watering of the eye;
- Evidence of chemical substances or containers in the vicinity (St John Ambulance et al, 2006).

The priority of the first-aid treatment of a chemical injury is to irrigate the eye so that the chemical is diluted and dispersed. The eye should be washed out immediately with large amounts of water.

CS gas injury
CS gas is a solvent spray used by the police for protection and riot control but it can be used by others illegally. If it gets into the eye it can be very painful and cause lachrymation. Effects usually wear off within 10–15 minutes but can last longer if the gas was used in a confined space (Wyatt et al, 2006).

Wound injury
A wound injury to the eye may not always be obvious and can easily be missed. It can be caused by a direct blow or by sharp fragments of glass or metal shooting into the eye, for example, when using a hammer and chisel (St John Ambulance et al, 2006).

TREATMENT
Foreign body in the eye
- Sit the casualty down, facing the light;
- Provide reassurance and advise the casualty not to rub the eye;
- Stand behind the casualty and gently tilt their head backwards;
- Using the finger and thumb, separate the
eyelids gently and examine the eye (Fig 1);
● If a foreign body is seen on the conjunctiva, irrigate the eye with clean water (Fig 2);
● If irrigation fails, lift the foreign body off using a moist swab or the damp corner of a clean handkerchief or similar (Fig 3).
Using a sterile cotton-wool bud is advocated (Wyatt et al, 2006), but one may not be available;
● If it is suspected that there is a foreign body underneath the upper eyelid, ask the casualty to gently pinch their eyebrow and pull the upper eyelid over the lower eyelid (Fig 4). If this fails to dislodge the foreign body, blinking under water may be successful (St John Ambulance et al, 2006);
● If first-aid measures are unsuccessful, advise the casualty to seek medical help.

Chemical injury
● If available, don protective gloves;
● Advise the casualty to put their head under gently running cold water for at least 10 minutes (Fig 5) – it may be easier to use an eye irrigator or glass and pour water over the eye. Note that it may be necessary to prise the eyelids open if they are closed tight in a spasm of pain;
● Ensure the eyelid is thoroughly irrigated both inside and out, and take care to avoid allowing contaminated water to splash into the unaffected eye;
● Apply a sterile eye pad or a clean, non-fluffy pad over the injured eye (Fig 6);
● Arrange for the urgent transfer of the casualty to A&E;
● If possible, identify the chemical involved to help medical staff prescribe the best possible treatment;
● Ask the casualty to keep their uninjured eye still as movement of that will also result in movement of the injured eye, which could aggravate the injury (Jevon, 2006; St John Ambulance et al, 2006).

CS gas injury
● Minimise exposure to the CS gas – escort the casualty to a well-ventilated area;
● Reassure the casualty that the symptoms will soon resolve;
● If the eyes are painful, fan them to speed up the vaporisation of the CS chemical;
● Discourage the casualty from rubbing their eyes;
● Arrange transfer of the casualty to hospital if there has been a significant exposure to CS spray at close quarters (St John Ambulance et al, 2006).

Wound injury
● Lie the casualty down, support their head;
● Apply a sterile eye pad or a clean, non-fluffy pad over the injured eye to protect it from any pressure unless there is a protruding object (Fig 6);
● Ask the casualty to keep the uninjured eye still because movement of this will also result in movement of the injured eye which could aggravate the injury (St John Ambulance et al, 2006);
● Arrange transfer to A&E;
● Never try to remove an object, such as a dart, embedded in the eye (Wyatt et al, 2006).

REFERENCES