Corneal injuries

The cornea is the transparent dome at the front of the eye that covers the pupil and the iris (the coloured part of the eye). Injuries to the cornea are common, and may include abrasions (scratches), lacerations (jagged cuts) or wounds from foreign bodies.

Causes of corneal injuries

Corneal abrasions are commonly caused by eye rubbing, fingernails, tree branches, thrown objects and contact lenses. Lacerations are frequently caused by sharp objects such as pencils or screwdrivers. Foreign bodies may include dirt, wood, metal or glass fragments.

Symptoms of corneal injuries

Symptoms may include:

- watering and irritation of the eye;
- a feeling that there is something in the eye;
- pain in the eye;
- blurred vision; and
- sensitivity to light.

Most of these injuries are relatively minor, and with the correct treatment will heal without any significant long-term problems.

Occasionally, however, injuries, especially those from sharp foreign bodies at high speed, may extend into the deeper layers of the eye. These penetrating eye injuries are more serious and may potentially result in loss of vision in that eye.

Foreign bodies that are retained in the cornea can cause infection and retained metal fragments can cause persistent inflammation and long term defects in the corneal surface if they are not treated.

Diagnosis

Firstly, your vision will be checked, and then your doctor will carry out an eye examination. A slit lamp microscope or other magnifying instrument is generally used.

Eye drops containing a dye (fluorescein) may be used to help make corneal injuries show up more easily.

If a penetrating eye injury or foreign body within the eye is suspected, immediate referral to an ophthalmologist (eye specialist) is required and a CT or MRI scan may be requested.

Treatment of corneal injuries

Corneal abrasions are often treated with an antibiotic eye ointment or eye drops for several days to prevent infection. The doctor will need to follow you up to check that the wound has healed and that your vision is all right.

If a corneal foreign body is detected, eye drops are used to numb the surface of the eye so that the foreign body can be removed. In addition to topical antibiotics, a cycloplegic eye drop may also be used. This prevents painful spasm of the muscles which constrict the pupil.

Metallic foreign bodies may leave behind a ‘rust ring’, which will need to be removed under topical (local) anaesthesia, possibly by an ophthalmologist.

Sometimes an eye pad is applied for comfort whilst the abrasion is healing. If this is the case, it is important you do not drive whilst wearing it.

Contact lens wearers may be advised to discontinue their use of the lenses temporarily whilst the abrasion is healing. Your doctor will advise how long you need to do this for.

Prevention
Injuries from foreign bodies commonly result from grinding, drilling and welding, hence it is very important to wear protective eyewear when carrying out these or any other high-risk activities.

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References


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