



## RECURRENT CORNEAL EROSIONS

### WHAT IS THE CORNEA?

The Cornea is the clear front window of the eye. It covers the coloured portion of the eye much like a watch glass covers the face of a watch. The outermost layer of the cornea is called the corneal epithelium.

### WHAT IS A CORNEAL EROSION OR ABRASION?

The cornea can be scratched or injured by such things as a contact lens, a fingernail or a twig, and other external sources, including eye surgery. This can cause a corneal erosion or abrasion. This can cause pain, redness, light sensitivity and watering of the eye(s). If an erosion occurs, most of the time the cells on the surface slide across to cover the defect within a few hours and symptoms are relieved.

Sometimes however the cells do not stick down firmly to the underlying tissue of the cornea, and the painful erosions can recur. This most often happens either first thing in the morning or during sleep. Inherent disease of the cornea (Epithelial Basement Membrane Dystrophy) is often a contributing factor. Occasionally the healing response on the surface can give rise to irregularity and blurred vision or a changing glasses prescription.

### HOW IS THIS PAINFUL CONDITION TREATED?

The most common treatment is to **lubricate** the eye with ointment or gel, particularly overnight, to decrease the friction between the upper eyelid and the cornea. This can allow the damaged epithelium to heal, but may take a month or 6 weeks of treatment to be effective. The eye is most painful when it moves, and since both eyes move together, it is often helpful to rest both eyes, reducing movement and further decreasing pain. An antibiotic may be prescribed to prevent infection. Corneal erosions which are recurrent often require the long-term use of ointments at bedtime.

Sometimes the **loose cells have to be wiped off (debrided)** and a soft bandage-type contact lens placed on the eye to facilitate healing, and this may be left in the eye for several weeks. Severe cases may require the doctor to make tiny **micro-punctures** of the corneal surface to encourage adhesion of the surface cells, if the problem is localised. Sometimes the **excimer laser Phototherapeutic Keratectomy (PTK)** is used for this purpose, and has about a 75% success rate. The laser is the same one used to treat refractive (focus) error, but the amount of tissue removed is so small that little or no change in focus is usually noted. Again a bandage soft contact lens is often used after the laser treatment for a few weeks. The main risk with the above treatments is the chance of serious infection of the cornea which could lead to scarring and decreased vision.

### WHAT ARE THE POSSIBLE COMPLICATIONS?

If bacteria get into the tissues under the protective corneal epithelium, infection or corneal ulcer can occur. These can be very serious and may cause decreased vision in the eye. This is also a risk with any of the surgical treatments.

## **WHAT IS THE USUAL OUTCOME?**

Erosions can recur if the epithelium is disturbed or the eye is rubbed, which can frequently occur upon awakening. This may require the gentle removal of the abnormal epithelium, or the use of a bandage soft contact lens. Sometimes if the problem is recurrent and very troubling, the doctor may consider using minor surgery to try to heal the eye.

Micropuncture of the surface or excimer laser treatment (PTK) may be considered in severe cases. PTK has an 80% chance to significantly improve symptoms.

In the majority of cases corneal erosion will heal completely. Proper care by you and your ophthalmologist is necessary to help prevent serious consequences.

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