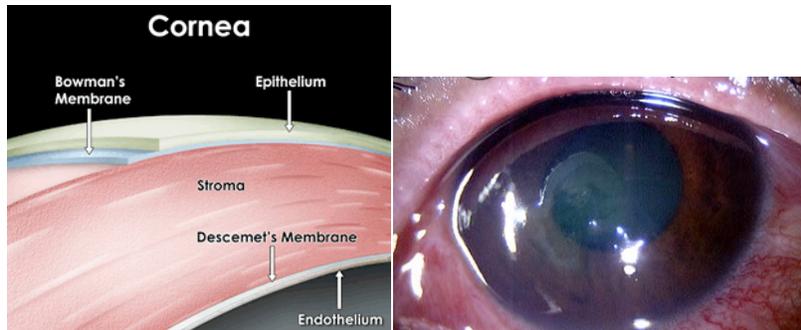


Recurrent Corneal Erosions (RCE)



An injury to the outer layer of the cornea, the Epithelium, usually heals within a few days, and results in no long term damage. However, if the Epithelium does not fully reattach to the underlying layer, Bowman's Layer, causing them to come off easily then that focal point may be a source of future problems. This is called a Recurrent Corneal Erosion, RCE. This can occur days, months or even years after the original injury.

An individual with this condition wakes up in the morning in severe pain upon opening their eyes. The affected eye is red and extremely light sensitive. It improves as the day progresses, but it may take several days to fully improve. This event can re-occur every few weeks, or months each time being worse than the time before and in severe cases it can occur every day. Lasting longer, hurting more, and not fully settling. This is a typical course of action for RCE. Since the Epithelium did not fully re-attach to the Bowman's layer after the injury, it gets pulled off at the point of injury. During sleep, it gets stuck to the inner layer of the eye lid and tears away from the cornea. These events can be mild or extremely painful resulting in decreased vision, and constant foreign body feelings in the eyes.

Recurrent corneal erosion may affect one or both eyes, depending on the underlying cause.

Signs and Symptoms

- Severe pain (especially after awakening)
- Blurred vision
- Foreign body sensation
- Dryness and irritation
- Tearing
- Red eye
- Light sensitivity

Diagnosis and Detection

Using a slit lamp microscope, the doctor examines the corneal layers under high magnification. Eye drops containing green dye called fluorescein are usually used to stain the areas of missing epithelium, allowing the doctor to assess the size and depth of the erosion.

Treatment

Management of RCE syndrome is usually aimed at regenerating or repairing the epithelial basement membrane to restore the adhesion between the epithelium and the anterior corneal structure. In mild cases, the condition may resolve spontaneously within a few hours. However, more often, treatment is required to promote healing and to relieve the symptoms. The healing rate for an abrasion due to RCE syndrome is generally slower than the healing rate for a similar abrasion due to other factors.

Treatment varies substantially from using lubricating ointment at bedtime to keep the cornea from getting stuck to the eye lids during sleep; to Phototherapeutic Refractive Keratotomy (PRK).

Lubricating ointment is usually prescribed as the first line of treatment. Artificial tears are also recommended to keep the cornea moist.

Most patients with recurrent corneal erosions respond to lubrication therapy. Those with underlying corneal dystrophy may require additional treatment.

PRK is the removal of corneal tissue and is reserved for severe and persistent cases (usually in patients with associated corneal dystrophies). The corneal area is first bathed in alcohol to remove the epithelium, or remove the top layer, then PRK is performed to treat the damaged area. A bandage contact lens is then applied to the eye, while waiting for a whole new layer of epithelium to re-grow. This can take up to 5-7 days. Upon healing, the epithelium is now usually fully re-attached to Bowman's membrane.