DR BRENDAN CRONIN
OPHTHALMOLOGIST

Recurrent Corneal Erosions



Please read this before you see Dr Brendan Cronin, as it contains important information about your condition & treatment.

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WHAT IS A

Recurrent Corneal Erosion?

The clear window at the front of your eye is called the cornea. The outermost layer of the cornea is called the epithelium. This is the layer affected by recurrent corneal erosions. The epithelium is like the skin of the eye in that it regenerates itself every 3-4 days. There is a higher density of nerve endings underneath the epithelium than anywhere else in the human body. This means that when there is a small break (erosion) in the epithelium, it is generally extremely painful.

Recurrent corneal erosions can occur as a result of trauma or an inherent weakness in the surface of your eye. Traumatic causes are typically from a fingernail or plant matter that scratched your eye – sometimes many years ago. Patients with an inherent weakness in the eye have a condition called Epithelial Basement Membrane Dystrophy ("EBMD"). EBMD is very common but most people who have it never have any symptoms from it.

A corneal erosion often occurs in your sleep. During your REM (Rapid Eye Movement) sleep your eyes often become dry. As your dry eyes move under your closed eyelids the epithelium can sometimes tear – this is called an erosion. Erosions often occur at a weak point created by previous trauma or EBMD. This weak spot in your epithelium then becomes more and more prone to the same problem. Hence the recurrent erosion. Patients with this condition classically describe waking up at around 3am feeling as though they have been stabbed in the eye with a needle.



DR BRENDAN CRONIN

RECURRENT CORNEAL EROSION

Non-Surgical Treatments

Non-surgical medical treatment is generally used for very small or mild erosions. These medical treatments include:

SHORT TERM TREATMENTS FOR NEW EROSIONS:

1. A "BANDAGE CONTACT LENS"

These work like a band-aid for the cornea. They create a barrier between your cornea and the eyelid to allow the erosion to heal. They often reduce your pain significantly.

2. ANTIBIOTIC DROPS

These are just preventative to ensure you do not get an infection at the site of the erosion.

LONGER TERM TREATMENT TO PREVENT RECURRENCE:

1. OPTIMEL EYE DROPS

These drops are made from Manuka honey. The honey has special healing properties but the drops are also "hypertonic". These help to compress the epithelium and reduce the rate of erosions.

2. STEROID EYE DROPS (FML OR FLAREX)

These anti-inflammatory drops can reduce the rate of recurrent erosions.

3. DOXYCYCLINE TABLETS

These are an antibiotic. They have anti-inflammatory side effects that help to repair recurrent erosions.

4. LUBRICATING DROPS AND OINTMENTS

These help to keep the cornea moist and stop further erosions from occurring. Lubricating drops are used throughout the day to keep the eye comfortable. Many people use an ointment just before they go to bed to keep their eye moist in their sleep.

5. OTHER TREATMENTS TO IMPROVE DRY EYES

There are many of these. Dr Cronin will recommend the appropriate ones for each person.

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RECURRENT CORNEAL EROSION

Surgical Treatments

Many recurrent erosions require surgical treatment. There are 2 very similar approaches, both are very effective. The first is called a diamond burr to Bowman's Membrane. The second is a phototherapeutic keratectomy.

DIAMOND BURR

This procedure is typically performed in the outpatient Major Procedure Room at the Queensland Eye Institute. It involves wiping the surface layer of epithelial cells off your cornea and then polishing the underlying foundation layer with a smooth burr. The polishing effect is very effective at stopping recurrent erosions.

You will have no discomfort at all for the procedure – it takes about 10 minutes. After the procedure a bandage contact lens is placed on your cornea. You will not have a pad or shield on your eye. Your eye will be completely numb for about 20 minutes after the procedure. It is a good idea to start taking your oral analgesia tablets as soon as the procedure finishes. Typically, your eye will be painful for 2-4 days afterwards. You must not drive yourself home from the procedure.

Watch a video explaining Diamond Burr Surgery by scanning this QR code with the camera on your smart phone.

SCAN ME

PHOTOTHERAPEUTIC KERATECTOMY

This procedure is performed as a day surgery patient at in hospital. As it is in a hospital you can have intravenous sedation (also called twilight anaesthesia) for the procedure. It involves wiping the surface layer of epithelial cells off your cornea and then polishing the underlying foundation layer with an excimer laser.

You will have no discomfort at all for the procedure – it takes about 10 minutes but you often won't remember much of that due to the sedation. After the procedure a special medication to promote rapid healing is placed on the eye and then a bandage contact lens is placed on your cornea. You will not have a pad or shield on your eye. Your eye will be completely numb for about 20 minutes after the procedure. You will have been given strong intravenous analgesia at the end of the procedure and you will be given oral analgesia to take home with you. Typically, your eye will be painful for 2-4 days afterwards.

Watch a video explaining Phototherapeutic Keratectomy by scanning this QR code with the camera on your smart phone.

SCAN ME

RECURRENT CORNEAL EROSION

Before the Day of Surgery

	LOCATION OF YOUR SURGERY	
FAQs	Major Procedure Room at QEI	Private Day Hospital
Who is this procedure generally best for?	People **without** private health insurance.	People **with** private health insurance.
Can I eat & drink prior to my procedure?	You can eat and drink up until your procedure.	Hospital staff will advise you of fasting details prior to the day of your procedure.
Should I take my normal tablets & medications?	Take them as you usually would.	Hospital staff will advise you of fasting details.
Will I be awake for the procedure?	Yes. You will be awake and perfectly comfortable. You can listen to music on our stereo or bring in-ear headphones. It only takes 10 minutes.	You can be anything from lightly sedated to heavily sedated as needed.
Which procedure will be performed?	A diamond burr procedure is performed.	Usually a phototherapeutic keratectomy is performed but sometimes a diamond bur is performed if appropriate.
Does someone have to come to take me home.	Ideally but it is not mandatory. You must not drive yourself home.	Yes. You must have a carer to take you home.
Are there any medications to take afterwards?	You will be advised of your post-op medications by Dr Cronin.	Medications will be arranged for you and you will receive an invoice for these.
What are the Medicare Item numbers?	42647	42810

RECURRENT CORNEAL EROSION

After the Procedure

TIME OFF AFTER SURGERY

You should take 4 days off for the procedure. One for the day you have the procedure and 3 days after. Your eye will be too uncomfortable to do much other than rest and relax. Some people take longer to heal than this.

FOLLOW-UP APPOINTMENTS

You will be given an appointment at the Queensland Eye Institute 1 week after the procedure.

RECOVERY

Everyone needs antibiotic, anti-inflammatory and lubricating eye drops after the surgery to aid recovery. It is important that you use these as instructed. Wash your hands before you instil the drops. There is a page at the back of this brochure explaining how to use them.

WHEN CAN I DRIVE AGAIN?

As soon as your vision returns to or is close to normal, and your eye is comfortable, you can return to driving. This is generally around 1 week post-op.

WHAT CAN I DO AFTER SURGERY?

- You can wear your glasses.
- You can exercise and return to normal activity straight away (but you are unlikely to do much for 2 days after the procedure).
- You can shower and wash your hair as normal.
- You can wear eye make-up after 1 week.

WHAT CAN'T I DO AFTER SURGERY?

- No swimming for 14 days after the procedure.
- Do not forget to take your eye drops.

OTHER POST-OPERATIVE CARE

You do not need to wear an eye pad or shield.

RECURRENT CORNEAL EROSION

Risks

No surgery is completely risk free, however, serious complications from either procedure are rare. Risks include:

PAIN: Everyone has a sore painful eye after the procedure. You will have lots of oral analgesia to help with this. Generally, it is best to just close both eyes (even if you only have the treatment on one eye. The pain will normal persist for 2-3 days.

RECURRENCE: Even though the procedure is very effective, a small number of patients will still have recurrent corneal erosions. The procedure may need to be repeated if a recurrence occurs.

DELAYED HEALING: This is rare but in some people the epithelium may take an abnormally long time to heal. Your eye may still be sore and have poor vision for this period.

REFRACTIVE CHANGE: Sometimes the procedure will change the strength of your glasses. Sometimes there will be a large change for a few weeks that resolves and rarely, there will be a permanent change that requires a change to your glasses prescription.

INFECTION: This is very unlikely, especially if you use your drops as directed, but also a very serious sight threatening issue it if occurs.

WORSE VISION: This is extremely rare but could conceivably occur due to some unforeseen issue. The most likely cause of this would be an infection.

No consent form can cover every conceivable risk but this is a thorough list of the potential complications of both alcohol debridement and diamond burr surgery as well as a photo therapeutic keratectomy.

YOUR NOTES & QUESTIONS

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