DACROCYSTORHINOSTOMY (DCR) SURGERY

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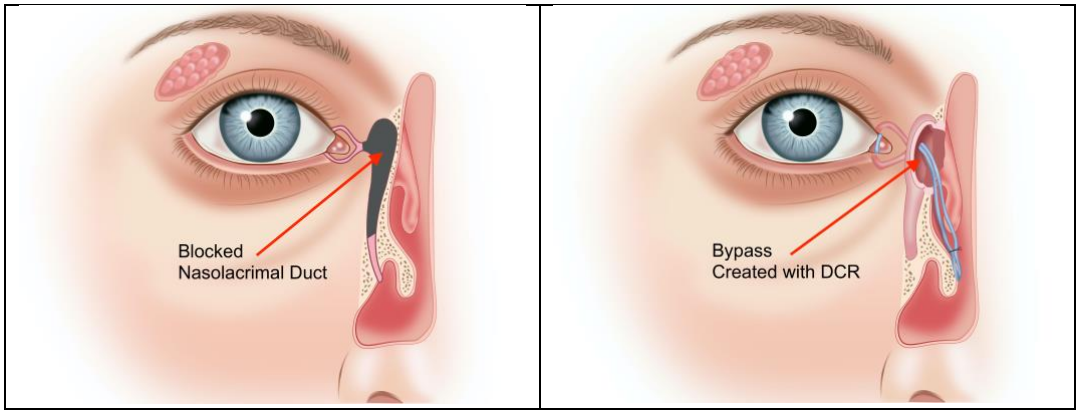

What is tear duct (or 'nasolacrimal duct') obstruction?

The tear duct (or 'nasolacrimal duct') helps to form the natural pathway of tears to drain from the eye into the nose. A blockage of the tear duct can cause continuous watery eyes, mucous reflux and in some cases, acute bacterial infection.

Why do the Passages Become Blocked?

The normal nasolacrimal system does not have much spare capacity (this is why we cry) and the narrow drainage duct that runs through the nose becomes narrower with age. In some cases eye or sinus infections can worsen this narrowing.

What is a Dacrocystorhinostomy (DCR)?

DCR is an operation to form a new tear drain between the eye and nose. It allows tears to drain by bypassing the blocked nasolacrimal duct. A DCR will be offered after other causes of watery eye (such as reflex watering due to dry eye) have been excluded and treated. Syringing with salty water through your tear duct system in the clinic and examining the nose with a telescope will help to confirm the presence of a blocked tear duct as the cause for your watering eye.

What does DCR Surgery Involve?

DCR surgery involves opening the tear drainage passage so that the tears drain into the nose. A small amount of bone is removed between the tear sac and nose in order to bypass the blocked nasolacrimal duct. Temporary silicone tubes are often inserted internally to ensure the new passage remains open in the healing phase. The tubes are removed from the nose in the clinic between 4-6 weeks after surgery.

There are two approaches to DCR surgery - external DCR and endonasal DCR.

Endonasal DCR

Endonasal DCR is a minimally invasive procedure using a camera or endoscope via the nose. The procedure is similar to external DCR, except there is no cut through the skin or scarring on the face.

External DCR

External DCR is the traditional approach where the nasal space is accessed through a small incision (10-15mm) in the side of the nose, where a pair of glasses would rest. Sutures are used internally and sometimes externally. If external sutures are used, they are removed at 2 weeks. A small scar is created at the incision site, which usually fades with time. External DCR may be indicated if the nasal space is too narrow for successful endonasal DCR or if a biopsy of the lacrimal sac is indicated.

What Type of Anaesthetic is Necessary?

DCR surgery is usually performed as a day only procedure under general anaesthesia where you are asleep and typically takes 60-90 minutes. Occasionally patients will stay in hospital overnight. If a patient is not medically well enough for a full general anaesthetic, they may be suitable for an external DCR under local anaesthetic with sedation. Local anaesthetic will prevent any discomfort but you may hear a crunching sound which is quite normal and not much different to a visit to the dentist.

How Successful Is DCR?

When there is a complete blockage of the tear duct system, DCR surgery has a 90-95% success rate of improving a watery eye or mucous reflux. In partial obstruction, success rates range between 50-70%. Rarely, if the blockage is in the tiny tear canals on the eyelid (canaliculi), the success rate is less, varying between 50-90%. Dr Kaushik will discuss if you have a complete or partial blockage and the likely outcome of the surgery. Minimally invasive endonasal DCR and external DCR have the same rates of success.

What are the Main Risks of DCR Surgery?

- Nose bleeding: ***is normal up to a week after the operation, particularly in the first 24-72 hours.*** This may be a steady trickle but there should not be gushing of blood. If there is excessive bleeding that cannot be stopped you will need to call Dr Kaushik immediately and present to your nearest Emergency Department.
- Bruising: temporary lid swelling or bruising may occur and typically resolves within 2 weeks.
- Tubes: can sometimes protrude from the inner corner of your eyelids. This can be gently pushed back in. If this doesn't work, please contact Dr Kaushik. The tubes may also be just visible inside your nose, which is normal.
- Infection: may occur within the first week, but is rare and treatable with antibiotics.
- Watering: may be normal until the tubes are removed. However it may persist as a result of internal scaring of the new tract. This may be improved with a second operation.
- External scar: In external DCR, the skin incision may be visible in the long term.
- Complications such as brain fluid leak, double vision or a decrease in vision have been reported however are exceptionally rare

Are There Alternative Treatments?

Alternatives to DCR have been trialed in various parts of the world with limited success. These include balloon stenting, tube insertion without creation of a new tract and small osteum laser DCR. None of these treatments approach the success rates of DCR.

What if I Choose Not to Undergo DCR Surgery?

DCR surgery aims to improve your quality of life through an improvement of tearing or recurrent eye infections. Your symptoms are unlikely to improve without the surgery, however in the vast majority of cases no harm comes from opting to delay or not proceed with DCR surgery. Rarely, in the case of major infection, a DCR may be urgent or highly recommended.

Ceasing Blood Thinners

Blood thinning medications such as aspirin, clopidogrel (Plavix, Iscover), Pradaxa, Apixaban and warfarin need to be stopped prior to DCR surgery. Please let Dr Kaushik know if you are taking any blood thinning medications, so that she can discuss this with your GP.

Anti-inflammatory drugs and supplements including: ibuprofen (Nurofen), fish oil, ginger, ginseng and garlic should be ceased 2 weeks prior to surgery.

What is the Expected Postoperative Recovery?

Most people require a week off work as some nose bleeding is normal after the operation, particularly in the first 24-72 hours. There is usually no significant pain after the surgery however you may experience some grittiness of the eye, discomfort, swelling and bruising. Your nose will feel blocked for 1-2 weeks due to nasal packing used in the operation.

Persistent tearing in the postoperative period is normal until the tubes are removed and postoperative swelling has settled. Specific postoperative care instructions will be provided on the day of surgery.

Patient Acknowledgement

I acknowledge that I have read this information sheet and understand that there are limits to dacrocystorhinostomy surgery. In particular the end result with be determined by a combination of the underlying pathology and the surgery. Dr Kaushik will aim to improve the symptoms of eye watering or mucous reflux however an exact outcome or symmetry cannot be guaranteed even when the surgery is performed with all due care and expertise.

Name: _____ Signature: _____ Date: _____