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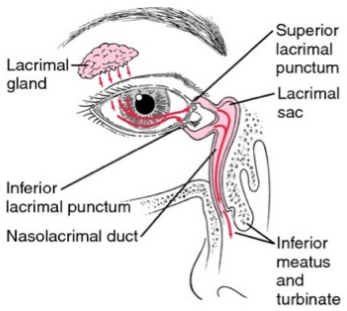
Patient information leaflet
Dacryocystorhinostomy (DCR)

What is it?
A dacryocystorhinostomy (DCR) is an operation to allow free drainage of tears into the nose. It is indicated when the normal tear drainage pathway (the nasolacrimal duct) is blocked causing recurrent infection and/or a watery eye. The operation involves removing a piece of bone from your nose to create a new connection between your tear sac and your nose in order to bypass the blockage in the tear drainage system.



The tear drainage system

There are two ways of doing the surgery: externally that is, through the skin, and endonasally, that is, from within the nostril.

What are the benefits?
The success rate is approximately 90%. Most patients experience resolution of their tearing or discharge and have little if any post-operative discomfort.

What are the risks?
There are risks associated with any operation. There are small risks associated with general anaesthesia.

The main risks of this operation include bleeding (specifically nose-bleeds), bruising and swelling which tend to resolve in one or two weeks. Other risks include infection and formation of scar tissue, which can block the drain again. This may require repeating the procedure. Leakage of cerebrospinal fluid from around the brain caused by extension of a crack in the nose bone, is an extremely rare potential risk of this operation (with only a handful of cases reported in the worldwide literature), which would require further surgery to repair. These complications occur very infrequently.
If the operation fails to cure your watery eye a further operation may well be successful. Usually this would involve a cut in the skin (that is an 'external' approach) even if the first operation was performed entirely through the nose ('endonasal').

What are the risks of not having the treatment?
These include continued watery eye or tearing and recurrent infection of the tear (lacrimal) sac known as dacryocystitis.

Are there any alternatives to this treatment/investigation?
In the presence of a blocked nasolacrimal duct alternatives to DCR surgery such as massaging the lacrimal sac are unlikely to provide any significant benefit or symptom resolution.

Preparing for the treatment/investigation
Before your operation, you will be asked to sign a consent form. This form is signed by you and your doctor. It is a permanent record that the operation and the type of anaesthetic have been discussed with you.

If you take aspirin or clopidogrel, we may ask you to stop these 2 weeks prior to your surgery, with your GP (General Practitioner)'s agreement.
If you take warfarin, your INR level should be 2.0 or less on the day of surgery. This will be discussed with you in more detail at your pre-operative assessment appointment,

During the treatment/investigation
What does it involve?
A small incision is made either in the skin on the side of the nose (external approach) or inside the nose (endonasal approach), then a piece of bone is removed from your nose to create a new connection between your tear sac and your nose in order to bypass the blockage in the tear drainage system. A fine soft silicone tube or stent (O'Donoghue tube) is then temporarily left in the new tear drain to keep the new channel open while healing occurs.

Sometimes if the obstruction cannot be opened, a small tube made of Pyrex glass called a "Jones tube", is surgically placed behind the inner corner of the eyelids. This remains permanently in the tear duct.

Dacryocystorhinostomy (DCR) surgery is usually performed as an outpatient procedure. It is usually done under general anaesthesia, when the patient is asleep throughout the operation, or in some instances, under local anaesthesia and intravenous sedation.

How long does it take?
The operation usually takes about 1 hour.

After the operation
Usually you will be discharged home on the day of your operation. You should have somebody at home with you for the first evening. You will be given eye drops to use and sometimes given a short course of antibiotic tablets. You should remove your eye pad and dressing the morning after your operation. You should take things slowly for the first 2 weeks after the operation.

You are advised not to do any heavy lifting or straining, no nose-blowing and no hot drinks for 2 weeks. This is to reduce the chance of a post-operative nosebleed and prolapse of the stents (seen as a loop of tubing in the inner corner of your eye). It is not unusual to have

light spotting of blood from the nose in the first few days after your operation but if a nosebleed does not stop or is heavy, you should attend your local Accident and Emergency department where your nose can be packed. After 2 weeks you can resume normal activities including a return to work. Please ask for a Certificate for work if you need one.

Follow-up
You will be reviewed in the Outpatients Department 2 weeks after your operation when any residual skin sutures may be removed. The silicone tubing usually stays in for up to 3 months and is then removed in the clinic. Removal is not painful: anaesthetic eye drops are put into your eye and anaesthetic is sprayed into your nostrils then the tube is cut and removed. After your 3-month post-operative appointment no further visits are usually needed.

When can I go home and resume my normal activities?
Usually patients are admitted on the day of surgery and discharged home the same day. When the eye pads and dressings are removed the morning after surgery, it is important not to rub the eyebrows or lids. Patients are advised to rest for a day or so before resuming their usual activities, including returning to school or work when they feel ready. Swimming should be avoided for 2 to 3 weeks after surgery.

You may gently clean the eyelids with cooled boiled water. You can clean the rest of your face normally.

Will I be able to continue to drive?
If you have normal vision in your non-operated eye you can continue to drive as long as you can read a number plate from 20.5 metres.

Follow-up
You will be given a post-operative follow-up appointment for about 2 weeks to monitor wound healing and remove sutures as needed.

Symptoms to report
If you have any concerns after your surgery including pain not relieved by simple painkillers (such as paracetamol or ibuprofen), bleeding or reduced vision, please contact Miss Mellington or her team.

Will I require further surgery?
More than one operation is occasionally required.