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Viscocanalostomy

You may have been advised by your doctor that you require an operation called “Viscocanalostomy” to improve the control of pressure within your eye. This operation is indicated if your eye pressure (Intraocular pressure, IOP) can not be controlled with anti-glaucoma eye drops alone.

What is Viscocanalostomy procedure?

Viscocanalostomy is a relatively new technique developed for glaucoma surgery and was first proposed in 1991. This procedure is intended to restore the natural drainage of fluid from the eye, thus reducing IOP in persons with glaucoma without entering the front chamber of the eye during the operation. In other words, Viscocanalostomy lower intraocular pressure without creating an aqueous (eye fluid) filtering hole in the eye. Although a relatively new procedure, Viscocanalostomy seems effective in lowering pressure in glaucoma patients as an alternative to other glaucoma surgical procedures. The choice between these procedures relates to the degree of intraocular pressure lowering required by a patient as well as the patient's risk factors for complications. In some cases, viscocanalostomy can also be used in conjunction with cataract removal. The viscocanalostomy will likely be used most often in earlier stages of glaucoma and also in patients who are at higher risk of sight threatening eye infections after other glaucoma surgical procedures.

How is the Viscocanalostomy procedure performed?

This operation removes the deep layer of a part of the sclera (white outer wall of the eye), enabling the eye fluid to filter out of your eye and into your blood circulation. This is an effective procedure, can also be safely done in combination with cataract surgery and avoids many complications seen with some other surgical procedures performed in glaucoma.

Although there are a variety of viscocanalostomy techniques, the procedure basically involves an incision on the white outer wall of the eye (the sclera), excision of deep scleral tissue to create a scleral reservoir, and unroofing of the canal that transport fluid from the eye to the blood vessels around the eye.

A high-viscosity viscoelastic is used to keep this new passage open and hence the name '**Visco**-canalostomy'. The outer scleral incision is then sutured water tight, trapping the viscoelastic until healing takes place.

How successful is this procedure?

Although a relatively new procedure, viscocanalostomy seems effective in lowering IOP when used in glaucoma patients as an alternative to more advanced glaucoma surgery. However, some researchers have reported that viscocanalostomy is less effective in lowering IOP than other procedures in patients with glaucoma, while eyes undergoing viscocanalostomy experience a **lower incidence of complications** during and after surgery. As in any surgical procedure several factors can affect the success of viscocanalostomy procedure. Some of these factors are...

1. Previous eye surgery
2. Diseases affecting the surface of the eye
3. Previous eye injury
4. Inflammation within the eye
5. Natural healing process causing scarring
6. Diabetes

Are there any risks associated with Viscocanalostomy procedure?

As with any surgery, there is the potential for complications or problems to arise. These complications can occur during surgery or after surgery up to several months or years after surgery.

Infection-associated blindness (endophthalmitis) is a very rare complication and may result in due to suture exposure and subsequent infection.

Hypotony (too low intraocular pressure) can be a potential complication and may need additional surgical procedures.

Sometimes the pressure lowering effect achieved by this surgery may not be sufficient and you may be advised to restart your anti-glaucoma drops or to have further surgery or laser treatment.

Before your operation

You should continue any eye drops and tablets for your glaucoma as prescribed until the time of your surgery, unless directed otherwise by your Ophthalmologist. If you take any blood thinning medicines for example Warfarin or Aspirin it is very important to tell the doctor or nurse in the clinic as this may need adjusting prior to your operation. You will be asked to attend a pre-operative assessment appointment. For this appointment please bring with you an up to date list of your current medications and a brief summary of your medical history, available from your GP if you are unsure. During this visit your general health and suitability for anaesthetic will be assessed.

After the operation

Immediately after your operation, your eye will be covered by a protective plastic shield. Eye drops are not usually required in your operated eye until the day after surgery. Any eye drops that use in your other eye must be continued as normal.

The morning after your operation the protective eye shield will be removed. Your eye will be cleaned and examined and eye drops started. The eye drops you will need to use in your operated eye will be different from the drops that you used prior to your operation.

Drops will need to be used 1-3 months after the operation. Each time you attend the out-patient clinic any changes to your eye drops will be discussed with you. If you are running out of the drops you must obtain a repeat prescription from your GP.

Post-operative visits

The success of viscocanalostomy surgery depends upon the rate and extent of the healing process of the tissues. Your intraocular pressure can vary in the first few weeks after surgery. During the first few weeks you will need to attend the out-patients clinic frequently for close monitoring. You may need changes to your drop medications during these visits. It is very important that you attend all your clinic appointments and use your eye drops as prescribed.

Activities after Viscocanalostomy procedure

Following surgery you are able to read and watch television as normal. It is however important to keep your eye clean and avoid contact lenses. Try to sleep on your un-operated side and tape the plastic eye shield provided over your eye every night for two weeks to avoid accidentally rubbing your eye whilst asleep. Avoid wearing eye make up for one month (never share eye make up with someone else).