

# Ophthalmology Directorate

## VITRECTOMY SURGERY

### INFORMATION FOR PATIENTS

#### **What is a Vitrectomy?**

Vitrectomy is an operation to remove the vitreous, a transparent gel that fills the cavity of the eye ball behind the iris and in front of the retina (at the back of the eye).

#### **Why is a Vitrectomy necessary?**

Removal of gel is necessary to gain the access to the retina and treat the following and other less common conditions:

- Retinal detachment
- Macular hole
- Epiretinal membrane (wrinkling of the retina)
- Vitreous haemorrhage (a bleed in the eye)
- Retrieval of the lens following complicated cataract surgery
- Significant floaters

#### **What is the retina?**

The retina is a thin layer of nerve cells that lines the cavity of the eye ball. It catches the light and passes this information via the optic nerve to the brain enabling us to see. A tear in the retina can cause partial or total loss of vision due to retinal detachment.

The Macula is the very central part of the retina that is used for seeing fine detail for example reading, writing and recognising faces. A hole or wrinkling in this part of the eye will affect your vision.

#### **How is the Vitreous removed?**

The surgeon makes three small self-sealing incisions through the white of the eye under a microscope, while the eyeball remains in the socket throughout the operation. Through these incisions we keep eyeball inflated while we are taking the gel out with the second instrument and a light source, so we can see inside the eye during the procedure.

Once the gel is removed the retina can be accessed and treated as necessary. The procedure usually takes 30 minutes to 2 hours to perform depending on complexity of condition.

#### **How is the eye anaesthetised?**

Surgery is nearly always performed under a local anaesthetic and very

rarely under a general anaesthetic. The local anaesthetic consists of numbing eye drops followed by injection around the eye. No sharp needles are used and although patients may experience some tightness, this fades after a few minutes and the vast majority feel little thereafter.

### **Is the Vitreous replaced?**

Vitreous has no real function in adulthood and can be safely removed. A number of substitutes may be used at the end of surgery.

- Air (this is absorbed within 1 week)
- Gas bubble (this is absorbed in 2-8 weeks)
- Transparent oil, which is not absorbed but surgically removed at a later date

### **Risks**

The national success rate for primary retinal detachment is approximately 80%. Success rates for other conditions vary and your surgeon will be able to advise you further. Complications are relatively rare, most important ones include severe infection and severe bleeding (1:1000), and retinal detachment (less than 5%).

Any surgery inside the eye will speed up the development of cataract. Most people will need cataract surgery within 2 years after vitrectomy.

### **What to expect after your Vitrectomy**

Expect your eye to be sensitive, red and swollen due to the nature of the surgery. Ice compresses placed gently on the swollen lids may help reduce the aching. The eye may also feel gritty.

You will be given anti-inflammatory eye drops to instil starting the day after your operation. These will help to reduce inflammation in the eye. Drops are usually required for 4 weeks following surgery. Drops or tablets to lower the eye pressure may also be prescribed. For macular hole and retinal

detachment surgery you may be required to position – instructions will be given after the operation.

You will be required to return to the eye clinic for your follow-up appointment, usually 2 weeks later. In addition, we may need to see you on the first day after your operation for a check-up.

The earlier the retinal diagnosis is made and treated the greater the chance of a successful outcome. However your rate of recovery and final visual outcome depends upon the pre-operative condition of your eye.

### **If a gas bubble is inserted**

If you have a gas bubble in your eye then the vision will be poor until the bubble gradually absorbs. You will see a dark shadow of the gas bubble moving in your eye as it shrinks and produces a spirit-level effect. It can be disorientating therefore we recommend that you do not drive until it resolves.

The gas bubble will expand in reduced atmospheric pressure (i.e. flying) and will raise the pressure in the eye to dangerous levels.

**You must not fly until gas bubble has resolved.**

If you are admitted to hospital after vitrectomy surgery for any condition which requires a general anaesthetic your anaesthetist needs to be aware of the gas bubble in your eye to avoid Nitrous Oxide anaesthetic. You will be asked to wear a yellow wristband with this information on.

**If Oil is inserted**

Silicone oil is a clear viscous fluid which is used in some patients instead of gas as it provides long term support of the retina required in the repair of complicated retinal detachments. It also gives a quicker visual recovery, no restriction in flying and less need for head positioning post-op.

However silicone oil is not absorbed and needs to be surgically removed at a later date.

If you have any problems following your operation the staff in the ophthalmic department will be happy to take your call.

Please ring:

Nelson Day Unit - 01603 288038

Monday – Friday 07.30-17.00

**At all other times please ring 01603 286286 and ask the switchboard to contact the OPHTHALMIC (EYE) DOCTOR ON CALL**

