East and North Hertfordshire NHS Trust

Patient information – Retinal detachment surgery

Department of Ophthalmology

What is a retinal detachment?

The back portion of the eye is lined on the inside with a thin layer of tissue called the retina. The retina is light sensitive and is important in forming images of eyesight. If this layer separates from the inner wall of the eye, it is called a retinal detachment.

There are several ways a retina can detach, but the most common reason is because of the formation of tears or holes within the retina. Very often, these tears or holes develop as part of the natural process of ageing. Retinal detachments are more common if you are short-sighted (myopic); have had previous eye surgery; had trauma or injury to the eye or if you have a family history of retinal detachment.

Treatment

A retinal detachment will almost always spread to involve the entire retina and lead to loss of vision, which may become permanent. For this reason, treatment is usually recommended. Not all types of retinal detachment will require surgery, but this is not common.

If the retina is successfully reattached, further loss of vision can be prevented and vision may also improve after surgery. Even after successful surgery, vision does not always return to the level it was before the retinal detachment occurred.

Types of surgery

There are two main methods of surgery:

1. An internal approach called vitrectomy;
2. An external approach called scleral buckling.

On some occasions both methods may be used at the same time.

1. **Vitrectomy** - The inside of the back of the eye is filled with a jelly like substance called the vitreous gel. In a vitrectomy operation, very small instruments are placed inside the back portion of the eye to remove the vitreous gel. The retina is then sealed back in place with freezing treatment

(cryotherapy) or laser. The sealing process takes about one week and because of this, the eye is filled with either a gas or silicone oil bubble. These bubbles help to hold the retina in place while the retina heals. The choice of gas or oil will vary depending on the type of retinal detachment; the surgeon will discuss this with you at the time of surgery.

If a gas bubble is used, it will disappear slowly on its own over several weeks. With a gas bubble in the eye, you will not be allowed to undertake travel by air and you are advised not to drive while the gas is in the eye. When gas is in the eye and if for any reason you need to have a general anaesthetic, you **must** tell the anaesthetic doctor that there is a gas bubble in your eye.

A silicone oil bubble does not disappear on its own. Further surgery will be necessary to remove it once the retina has healed from the detachment.
Both the gas and oil bubble will cause blurred vision until they are no longer present in the eye.

Posturing - The oil and gas bubble work by exerting a pressing force on the areas where the retina was torn. For this to be the most effective, the bubble will need to be positioned directly next to the tears in the retina. This will require you to keep your head in a particular position - this is called posturing. You will be told the position you need to keep after the operation.

Posturing is recommended for 45 minutes of every hour, both day and night and usually for 5 to 7 days. If you do not posture or are unable to do so, it may affect the outcome of your surgery. Posturing will increase the chance of a good outcome after surgery. If you cannot posture, surgery may still be successful. However, it is strongly advised to posture after surgery for a detached retina.

2. **Scleral buckling** - Some retinal detachments are best repaired by using an external approach called scleral buckling. With this method, a piece of silicone (the buckle) is stitched to the outside of the eye (the sclera). This will push the outer wall of the eye inwards to reattach it to the retina in the area where retinal detachment has occurred. The buckle is not removed unless it becomes infected or loosens itself from the eye.

Anaesthesia

Surgery for a retinal detachment can be performed with either a local or general anaesthetic:

- Local anaesthetic - you will be awake during the operation but the eye is made numb with an injection of an anaesthetic drug around the eye.

- General anaesthetic - you will be asleep for the duration of the operation. The anaesthetist will discuss this with you before surgery.

Risks of surgery

A retinal detachment that is of recent onset and which does not involve the entire retina has about 90% of being successfully repaired with one operation. Larger retinal detachments, and those present for more than 1 or 2 weeks, have a lower success rate. The most common reason for this is scarring of the retina. The medical term for this scarring process is called proliferative vitreoretinopathy (PVR). This means that for all patients with a retinal detachment, sometimes more than one operation may be required to reattach the retina.

Other main risks:

- Infection
- Haemorrhage or bleeding inside the eye

Infection and haemorrhage within the eye are very rare, but if they happen, it could lead to loss of vision and/or blindness.

- Cataracts - This will usually occur within 12 months of your surgery and will require a separate operation. In some instances, you may be offered combined surgery where the cataract is removed at the same time as when the retina is repaired.
- Double vision - This is usually temporary and gets better without treatment.
- High fluid pressure within the eye - This is usually treated with eye drops and usually resolves within a few weeks.

Fellow eye treatment

Some patients may have tears, holes, or weak areas in the retina of the fellow eye. These are sometimes treated with freezing treatment (cryotherapy) or laser to reduce the chance of a retinal detachment in this eye. If treatment is required, this will be discussed with you.

In some instances, the fellow eye will not require any treatment but you should still be aware of the symptoms suggestive of retinal detachment. You may have already experienced some or all of these symptoms in the eye with the detached retina. These are persistent or new flashes, floaters or missing parts in your field of vision. If you get these symptoms, you should have an urgent eye examination.

Recovery after surgery

In addition to posturing, you will need to put eye drops in the eye for up to 6 weeks. It is recommended to take at least 2 weeks off work and avoid strenuous activity for at least 2 weeks after surgery.

Vision is usually blurred immediately after both methods of surgery, especially if a gas or oil bubble has been used. The recovery of vision will depend on how much of the retina reattaches to the inside of the eye and can take up to 3 months in some instances. The recovery of vision is almost always a slow and gradual process.

Follow-up appointments

The eye will usually be examined the day after surgery, and then 2 weeks after this.

Please note that your follow-up appointment could be at either Lister, New QEII or Hertford County Hospital.

If you have any concerns or require any further information please contact the Urgent Eye Clinic:

- Monday - Friday: 9am to 7pm.
- Saturday: 9am to 12:30pm.
- Closed from Saturday after 12:30pm until Monday at 9am.
- Closed Bank Holidays - please attend your local A&E department.

Contact details:

The Lister Treatment Centre
Lister Hospital
Coreys Mill Lane
Stevenage
Hertfordshire SG1 4AB

Telephone: 01438 288122 - Select Menu Option 4

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