

VITREOUS HAEMORRHAGE SURGERY PATIENT INFORMATION

WHAT IS A VITREOUS HAEMORRHAGE?

A vitreous haemorrhage is a collection of blood within the eye, in the space between the retina and the lens. Normally the vitreous cavity is filled with clear, transparent gel. Light passes through the vitreous uninterrupted and is focused on the retina. When bleeding occurs into the vitreous gel, the light path is blocked, and vision is impaired.

WHAT ARE THE SYMPTOMS OF A VITREOUS HAEMORRHAGE?

A vitreous haemorrhage can be severe and result in legal blindness, or it may be mild and result only in annoying black floaters. The severity of visual loss is related to the density of the haemorrhage and the underlying cause for the bleeding.

It is important to understand that a vitreous haemorrhage itself usually does not damage the eye or permanently affect the vision. It is the underlying condition, eg diabetes, retinal detachment or vein occlusion which can permanently damage the vision.

WHAT CAUSES A VITREOUS HAEMORRHAGE?

A vitreous haemorrhage is usually due to a blood vessel within the retina breaking, and bleeding into the vitreous cavity. Some of the commonest causes of bleeding result from the development of fragile new blood vessels on the retina (***‘Neovascularisation’***) due to either proliferative diabetic eye disease (PDR) or blockages of the retinal vessels (i.,e. Retinal vein or retina artery occlusion/s)

Another important common cause of vitreous haemorrhage is a “Posterior Vitreous Detachment” (PVD). A PVD occurs due to of age changes within the vitreous gel (*vitreous syneresis*), which results in the gel peeling off and separating from the retina. As the gel separates, it can tear small blood vessels on the surface of the retina and/or cause a retinal tear, which can lead to retinal detachment.

Other causes of bleeding include macular degeneration, tumours, penetrating or blunt injuries to the eye or inflammatory diseases of the eye.

WHAT ARE THE TREATMENT OPTIONS FOR VITREOUS HAEMORRHAGE?

If a vitreous haemorrhage is mild and not affecting your vision, no treatment may be required. The floaters may be annoying, but if they are mild it is best to ignore them and wait for them to decrease with time. In some people with mild haemorrhages, the blood may clear within a few

weeks, while in other people with more severe haemorrhages, the blood may take many months to clear or may not clear at all.

If the blood is not clearing quickly enough, it can be removed surgically. However, it is important to weigh up the risks versus benefits carefully, and only proceed if the blood is causing noticeable problems with your vision or interfering with your day to day activities.

WHAT TYPE OF ANAESTHESIA IS USED? WHAT ARE ITS MAJOR RISKS?

Vitreotomy surgery is performed under local anaesthesia, with sedation. It is typically performed in a day surgery or hospital setting and an overnight stay is very rarely required.

The surgery takes approximately one to two hours and is not painful.

There are risks associated with anaesthesia, whether general or local. Complications of anaesthetic injections around the eye may include: perforation of the eyeball, injury to the optic nerve resulting in loss of vision, haemorrhage, retinal detachment, interference with retinal circulation resulting in possible vision loss, hypotension (low blood pressure) and respiratory depression. Any anaesthesia or medication can very rarely cause severe anaphylaxis (allergic reactions) which can result in death.

WHAT IS THE CHANCE OF SUCCESS?

Modern small gauge, pars plana vitrectomy (PPV) surgery is now very successful in clearing vitreous haemorrhage. With modern techniques the chance of clearing the vitreous haemorrhage is very high, however depending on the cause, there is a small risk that the haemorrhage may recur, which could rarely require further surgery.

The amount of vision that returns depends mostly on the cause of the underlying bleed. If the central retina (i.e. macular) is intact you can expect excellent visual recovery. However, if the cause is due to a retinal detachment or macular degeneration, permanent damage may have already occurred prior to any intervention and unfortunately these tissue changes sometimes cannot be reversed. Also, in some cases improvement occurs very slowly, as the retinal cells (photoreceptors) remodel, and the vision may continue to improve slowly, for instance recovery periods of up to **3-6 months** are not unusual.

WHAT HAPPENS AFTER THE SURGERY

Immediately after the surgery, a patch will be placed over your operated eye with tape. This will be removed the morning after the surgery when you come to the clinic. After that, there is no need to wear a patch during the day. A protective shield maybe recommended for sleeping, for the first 5-7 days after surgery.

Following surgery, your vision in the operated eye will be blurred due to swelling and the effect of dilating eye drops. Some patients, who have a gas bubble will see a black, wobbly, horizontal line which will slowly become lower and lower. This is the edge of the gas bubble and is normal and will go away completely when the bubble is reabsorbed.

For the first one to two weeks following surgery you need to take it easy. Eye drops need to be used for one to two months following surgery. These should commence the day after surgery, after you have seen your surgeon.

New spectacles will usually need to be obtained 3-4 months following surgery.

WHAT IF I HAVE A GAS BUBBLE?

- Dr Hogden will tell you if you have a gas bubble placed during surgery.
- If you have a bubble you will need to keep your **face down** for the first 24 hours. This is best done for at least 50-55 minutes in the hour, the other 5-10 minutes may be used to perform normal duties. You need to sleep with your head face down as much as possible. The face down position can be maintained whilst sitting in a chair and keeping one's head down.
- While the bubble is present, you **MUST NOT FLY** in an airplane **under any circumstances**. Doing so will result in **BLINDNESS** as the bubble expands with altitude. If you have air travel plans within the first two months after your surgery, mention this to your doctor.
- If you need to travel over the range to Toowoomba, you must discuss this with your doctor first. The increased altitude can cause severe, vision threatening pressure rises. It is usually best to stay at sea level for 1 week before going back over the range. This depends on the type of bubble, so ask your doctor.
- If you require surgery of any kind over the following two months you **MUST TELL THE ANAESTHETIST ABOUT THE GAS BUBBLE**, as nitrous gas anaesthetics will cause the bubble to expand and cause severe vision threatening pressure rises. This includes dental procedures.

WHAT ARE THE RISKS OF VITREOUS SURGERY

There is no guarantee that surgery will improve your condition. Sometimes despite everyone's best efforts it does not work. In addition, all surgery has risks. Sometimes it can make the problem worse, cause an injury, or create a new problem; if it does, this is called a complication.

Complications can happen right away or not until days, months, or years later. You may need more treatment or surgery to treat the complications.

Below is a brief list of the major risks of vitrectomy surgery. Careful consideration of these risks may help you decide whether you are ready to accept and proceed with surgery:

- A cataract develops in all adults usually around age 60-80 but will usually develop earlier after a vitreous haemorrhage than would be expected during the normal aging process. Sometimes cataract surgery will be required within a few months after vitrectomy surgery.
- Occasionally, the eye may develop increased pressure (glaucoma) and medication may be required to control this.
- A retinal tear or detachment may develop post-operatively and would require further surgery to repair.
- Infection and haemorrhage are very rare risks which may occur with any surgery. Very rarely, if you have a severe infection or severe bleeding you can go blind in the eye. The chance of this occurring is much less than 1 percent.

If you notice pain or deteriorating vision following surgery, Dr Hogden's consulting rooms should be contacted on **3831 0101** as soon as possible.

Other major risks can include:

- Poorly healing or non-healing corneal defects
- Corneal clouding and scarring (in severe cases may require corneal surgery)
- Lens complications such as dislocation or need for removal / replacement
- Double Vision
- Eye lid droop
- Redness of the eye
- Loss of circulation to vital tissues in the eye, resulting in decrease or loss of vision
- Phthisis (disfigurement and shrinkage of eyeball)

IS THERE A RISK TO MY OTHER EYE?

If you have had a vitreous haemorrhage in one eye, then there is a small risk of developing one in the other eye. You should have new symptoms such as flashing lights or floaters evaluated as soon as possible. Extremely rarely, the vision in the other eye can be affected by a condition called sympathetic ophthalmitis, however the incidence of this is less than 1 in 10 000.

If you have any further questions, or if you would like Dr Hogden to explain more, please do not hesitate to ask.