Macular Hole Surgery

Surgery for macular holes is one of the great advances in Vitreo-Retinal surgery over the last decade. This condition was previously untreatable, but now substantial visual improvement is achieved in most patients. Macular holes develop within the area of sharp central (reading) vision. This small area - no more than half a millimetre across – is the most delicate part of the retina.

The hole develops due to tightening of the vitreous gel. This usually occurs after the age of 60 or 70. Rarely macular holes follow trauma where tension pulls a hole open. As these holes are in nerve tissue, a tenth of a millimetre thick, it is not possible to stitch or glue them back together. Instead gas is used to fill the eye and is left inside the eye for a couple of weeks to support the hole while it is healing. The gas bubble supports the healing hole in much the same way as a plaster cast supports a broken bone. In general, the sooner the hole is closed the greater the visual improvement. This is not an urgent thing on a day to day basis rather the difference is noted on a month to month basis. The microsurgery concentrates on removing some of the abnormal vitreous (Jelly) within the eye and then peeling off scar tissue on the surface to release any tension pulling the hole open. Closure of the hole is achieved in over 90% of cases with one operation. Further surgery increases the chance even higher.

Complications are uncommon apart from potentially rapid cataract development. If there is already substantial cataract present, vitreous surgery for the macular hole can be combined with cataract surgery to deal with both problems at once. Serious complications such as retinal tears or retinal detachments occur in much less than 5% of cases. Other rarities such as damage from the bright light, haemorrhages, severe glaucoma and peripheral vision loss can also occur. There is between a one - three in ten thousand risk of infection.

After Surgery

- **The patient must look down towards the floor.** This allows the floating bubble within the eye to press the hole edges together as they heal. This positioning is generally performed for 5 days after surgery.
• **This is most important** - if this positioning is not done the chance of success is reduced considerably.

This is not as difficult as it seems. It is important to look down towards the floor – more towards the heels than the toes – for roughly 45 minutes each hour of the day (when awake). When sleeping try to look face down or at least roll on the side looking towards the floor. This is particularly critical in the first few days after the surgery.

• The eye should be comfortable. Panadol should provide sufficient relief from any discomfort.

• The gas bubble gradually gets smaller. This creates a crescent of vision that gradually increases from the top. It is similar to wearing a diving mask with water in the bottom that sloshes around. It is quite normal for the bubble to move around and sometimes to break into smaller ones.

• Vision generally improves considerably. There may still be a small amount of distortion that takes quite a while to settle. Some distortion may remain. It is important to recognize that macular holes may leave some irreversible damage to the area of sharp central vision.

• It is important to recognise that the gas bubble inside the eye blocks all useful vision straight ahead and this is not a complication. Features such as hands or feet can be seen when looking straight down through the bubble but there will be only very blurred shapes and light looking straight ahead. This is normal until the bubble dissipates.

It is critical not to fly or rapidly drive up a mountain while the bubble is present. It is also vital that you tell the anaesthetist if an urgent operation is needed with general anesthesia.

**Consultation**

Should you require a consultation for macular hole surgery, please call 1800 986 695, one of our friendly staff can assist you with an appointment at any one of our three sites: East Melbourne, Malvern and Doncaster

**More references**