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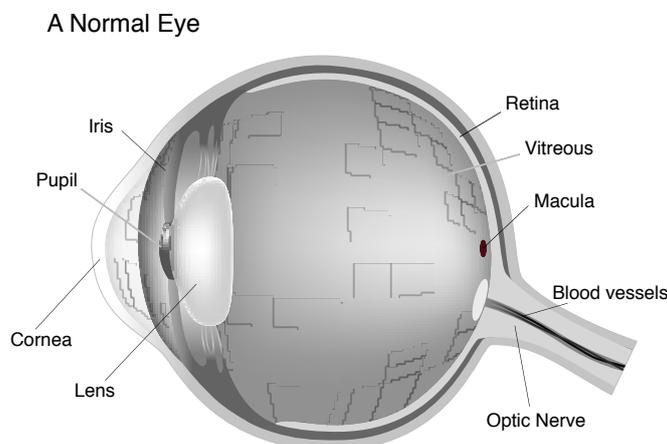
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## Patient Information: Vitreomacular Traction

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### Background

The retina lines the back of the eye. It functions a bit like the film in the back of a camera, in that it absorbs light to form an image of the outside world. The most important part of the retina is the macula – this is the part that the light comes to a focus on. It gives the central vision that is important for fine visual tasks such as reading and driving. The cavity of the eye is filled with a clear watery gel, the vitreous



### What causes VMT?

With age the vitreous often collapses and pulls away from the retina, called posterior vitreous detachment (PVD). Vitreomacular traction (VMT) occurs when the vitreous detaches from the retina except at the macular. The residual strand of vitreous pulls on the macula, distorting macular tissue.

### What are the symptoms of VMT?

In some cases, VMT causes no symptoms and is picked up during a routine medical or optician examination with optical coherence tomography (OCT), a special laser scan of the back of the eye. OCT is the best way to detect and monitor VMT.

If VMT progresses it can cause blurred and distorted vision in the affected eye. Sometimes it can pull a hole in the macula, in which case the central vision usually gets much worse.

VMT seldom damages peripheral vision, and some cases remain stable over time.

## **What treatment is available?**

Treatment may or may not be necessary. This depends on a number of factors: how severe the VMT is; what impact it is having on your vision and everyday life; what your vision is like in the other eye; if the VMT is worsening over time; and the risk of the VMT progressing to a macular hole.

One treatment option is an injection of a drug called ocriplasmin into the eye. Ocriplasmin aims to release the VMT and improve vision. It is only suitable for some patients. The more commonly used treatment is vitrectomy surgery, to release the VMT.

## **Ocriplasmin**

Ocriplasmin, trade name Jetrea, is a drug that is designed to dissolve the vitreous and loosen its adhesion to the macula. It resolves VMT in about 27-42% of cases, which is relatively low, but if successful this avoids having to undergo surgery, which is a larger intervention.

The most common side effect of ocriplasmin is floaters in the vision occurring shortly after injection. These are considered normal and tend to settle with time. Risks include loss of vision from problems such as: retinal detachment (where the retina comes off the back of the eye); altered colour vision (usually only temporary); drug toxicity; cataract (clouding of the natural lens in the eye, but this doesn't occur if you have already had cataract surgery); and infection (very rare but usually associated with severe loss of vision). Further information on the risks and benefits of Jetrea is available from the drug manufacturer at [www.jetrea.com/patients](http://www.jetrea.com/patients)

## **Eye surgery**

Surgery involves an operation called a vitrectomy. Tiny instruments are used to remove the vitreous and release its adhesion to the macula.

Surgery can be undertaken under a local anaesthetic (awake but with an eye injection to numb the eye), or under general anaesthetic (asleep). Surgery usually takes less than an hour.

The removal of the vitreous inside the eye does not cause harm. It is replaced by the natural fluid produced inside the eye (the vitreous is anyway about 99% fluid).

## **What are the benefits of VMT surgery?**

After release of VMT the vision is typically worse for a week or two. Thereafter vision should start to improve, but it can take many weeks or months to get the full benefit of surgery. Although vision charts fail to capture the full impact of VMT on vision, they

nonetheless show an improvement in about two-thirds of patients after surgery. Most patients notice less distortion and less blurred vision, but vision is seldom perfect, and some mild residual symptoms are to be expected.

### **What are the risks of VMT surgery?**

VMT surgery is relatively safe, and Professor Jackson will only present it as an option if the benefits are likely to outweigh the risks. However, all eye operations carry some risk, including the risk of further surgery and loss of vision.

Surgery to treat VMT speeds up the onset of cataract, where the lens inside your eye becomes cloudy. Often, an early cataract is removed at the same time as the VMT surgery to avoid cataract surgery in the future. The combined cataract-VMT surgery is called phacovitrectomy. Further information on cataract surgery is available on request in a separate information leaflet. If you have already had cataract surgery then VMT surgery will not cause a cataract to recur.

Eye pressure is often a bit high or low for a few days or weeks after surgery. Low pressure usually settles quickly without treatment. High eye pressure may require short-term eye drops to lower the pressure, but it usually settles. Rarely high pressure can persist and damage vision, but usually high and low pressure are transient, of little concern and do not affect the final outcome.

In about 1 in 20 operations, a gas bubble is deliberately left in the eye, usually because of a break or weak spot in the retina. This disappears on its own after a few weeks. If this occurs you may need to position your head for a few days after surgery and you cannot fly until the gas bubble goes.

There is an approximately 1 in 50 chance of requiring further retinal surgery to deal with complications, in particular retinal detachment. Retinal detachment occurs when the retina comes away from the back of the eye and even with surgical repair it can damage the vision, if it has spread to involve the macula.

There is an approximately 9% risk of having worse vision on an eye chart after VMT surgery, but any such loss is usually mild, and may sometimes be off-set by reduced distortion and other benefits not measured with an eye chart. Rarely, severe loss of vision can occur, and this is usually associated with serious infection or bleeding inside the eye. Thankfully, these events are very rare (about 1 in 500 cases), but in the most severe cases they could lead to your eye becoming totally blind, or extremely rarely, loss of the eye.

### **How do I prepare for surgery?**

If you take medications to thin your blood such as warfarin, clopidogrel, aspirin or rivaroxaban please tell Professor Jackson in advance of surgery. Sometimes (though not usually) you may need to stop these medications, or reduce the dose, before your eye operation.

You should continue all other medications as normal, including on the day of surgery. If you take regular eye drops these should usually continue before and after surgery, including on the day of surgery, but please check with Professor Jackson. Avoid eye makeup on the day of surgery.

If you are having the operation under local anaesthetic you can eat and drink normally. If you are having a general anaesthetic (asleep) *you need to stop eating and drinking 6 hours before surgery, with the exception of still water which you can drink until 2 hours before surgery.*

### **How long will I be in hospital?**

The operation takes about an hour, but the whole process of admission and treatment takes about 3-4 hours. Before surgery you will be checked-in by the nursing team, including some health checks such as blood pressure. They will instill about four sets of eye drops to dilate your pupils. After surgery the nursing team will give you time to recover, and ensure you are fit to go home.

Assuming your vision is sufficient in the unoperated eye, you can head home by yourself in a taxi, but ideally you should ask someone to collect you after surgery and escort you home. Do not drive home. If you have had general anaesthesia you need someone to escort you home and be with you for 24 hours after surgery

The operation does not require you to stay in hospital overnight although some patients elect to stay one night. Patients are typically seen a day or two after surgery, and then at about 1 week, and 1, 3 and 6 months after that.

### **What happens during surgery?**

Professor Jackson will usually see you briefly before surgery, or may call you for a telephone consultation the evening before surgery. If you have any questions or concerns, please raise them. He will draw a small mark on your forehead above the eye that is undergoing surgery, to confirm the correct side.

If you are having a local anaesthetic, the anaesthetist, or sometimes Professor Jackson, will give you the local anaesthetic injection around your eye before surgery commences. This stings for a few seconds as the anaesthetic goes in, but thereafter your eye should be comfortable. Professor Jackson will usually warn you if anything uncomfortable is to be expected, as there are a few points in the operation when you may briefly feel some discomfort. If your eye is painful, let Professor Jackson know, as he can easily top-up the anaesthetic.

Professor Jackson will clean around your eye with iodine (if you have an iodine allergy let Professor Jackson know in advance of surgery). Don't worry if you can feel this, as the anaesthetic aims to numb the eye more than the skin around it. For surgery you will lie flat on your back with a sterile cloth draped over your face. It can

feel a bit claustrophobic as the drape is initially placed over your face, but Professor Jackson will lift it off your face as much as possible. There will be oxygen pumped under the drape so even if it feels a bit stuffy, there will be plenty of air to breath.

As the eye is anaesthetised you do not need to worry keeping your eye still or blinking during surgery. However, you should try and keep you head and gaze still during the operation and try not to speak, unless you need to raise a concern. If you feel a cough or sneeze coming, let Professor Jackson know.

You will often feel water running down the side of your face and your hair may get wet during the operation. You will hear what is going on in theatre and Professor Jackson will speak to you at certain points in the operation. You may see light, but you will not see the instruments or the operation itself.

### **How do I care for my eye the morning after surgery?**

You will have a plastic shield covering the eye, and a soft pad underneath that. You should remove both the morning after surgery. Discard the soft pad but keep the plastic shield and tape it onto the eye at night for a week, to avoid banging your eye in your sleep. Orient/position the shield as it was the night after surgery. After the first night you will not need anything covering the eye by day.

When you remove the pad and shield you may find that your eyelids are stuck together with dried bloody tears. This is normal, as are a few bloody tears escaping from under the eye pad (for this reason sleep on a pillow that you don't mind getting slightly stained with blood). If needed, you can use some cooled boiled water and clean tissue or gauze to moisten the lids to help prise them gently apart.

Following surgery you will be given eye drops to use in the operated eye for a few weeks. These will help the eye recover from surgery and reduce the risk of infection. These commence the morning after surgery, after removing the eye pad.

Most commonly, Professor Jackson prescribes Maxitrol eye drops four times daily for one week after surgery, then reducing to three times daily for one week, then twice daily for one week, then stop; and Cyclopentolate (also called Mydrilate) three times daily for 10 days. If you have combined VMT and cataract surgery the Maxitrol will usually be required more often, typically six times daily for the first week after surgery, then four times daily for one week, then twice daily for one week, and finally once daily for one week.

### **What will my eye and vision be like immediately after surgery?**

It is normal for your eye to have some bruising following surgery. This bruising can affect the skin around the eye, but also the white of your eye might be bright red from blood under the skin of your eye. Like all bruises, this will gradually change colour and fade over the next few days.

Your eyelid may be a bit droopy from the anaesthetic. Your eye may also be a bit tender and gritty. If so, you can take your usual painkillers, such as paracetamol. If the pain does not settle or you have severe pain or ache inside the eye (rather than irritation on the surface of the eye) please call Professor Jackson.

Expect your vision to be worse than usual for a week or two after surgery. You may also notice some double vision, that should settle over a few days. If your vision gets suddenly worse rather than slowly better over time, please call Professor Jackson immediately.

### **Can I resume normal activities after surgery?**

You can do most normal daily activities although you should avoid unhygienic environments and swimming for two weeks. If you want to swim thereafter, wear swimming goggles or keep your eye out of the water for a month after surgery. You can shower and bath as usual, but avoid water going into your eye for a month. Avoid very vigorous exercise and intense straining for two weeks, but gentle exercise is allowed. Look out for injury to the eye. Also be sure to take extra care when carrying out everyday tasks, such as using steps or pouring hot drinks, as you may find it difficult to judge distances until the vision recovers. Do not drive until you are told it is safe to do so.

Most people will need about two weeks off work after surgery. The amount of time off work will depend on the kind of work you do and the kind of surgery that is done. If you want to return to work sooner it is unlikely to harm your eye, but you may not feel well enough to work for about two weeks.

If your surgery required you to have a gas bubble in your eye then it is important that you do not fly or go up high mountains, as gas expands at altitude and this increases the pressure inside the eye above safe limits. If you need a general anaesthetic you should inform your anaesthetist that you have gas in your eye, as certain anaesthetic gases need to be avoided. The vision will be very blurred until the gas bubble slowly leaves the eye.

### **Any further questions?**

If you have any further questions regarding VMT and the benefits and risks of treatment please do not hesitate to contact our office on 020 7060 1968.

**Disclaimer** *Whilst every effort has been made to ensure that the information in this leaflet is accurate and up-to-date, we cannot guarantee its completeness or correctness. It is not designed as a substitute for professional healthcare advice from a doctor.*