

Ocriplasmin

Ocriplasmin is a drug that can be used to treat patients with vitreomacular traction with or without macular hole.

What is vitreomacular traction and macular hole?

This is when the clear jelly filling the eyeball (we call it vitreous) pulls on the retina from the inside. The retina is like the film in the camera lining the inside of the back of the eye – like wallpaper. If it gets tugged on it can become distorted and so your vision can be distorted also (i.e. straight lines appear bent). In addition further pulling can in some cases cause a hole to form at the very centre of the retina – a macular hole (see information sheet on Macular Hole). In this situation the vision can drop further and distortion may increase.

What are the treatment options?

1. Monitoring

Monitoring may be suitable when you are not sure if you want treatment or not, particularly if you are not noticing much of a problem.

2. Treatment with injection of a drug into the eye (Ocriplasmin)

Ocriplasmin is only suitable for some cases of vitreomacular traction or macular hole – your doctor will tell you if it is an option. It is very easy to administer – this can be done in the Eye Clinic in a clean room. It will only be given once – if unsuccessful it will not be repeated. If there is no improvement within 6 weeks or vision becomes worse we will discuss other options including surgery.

3. Surgery (see information sheet "Macular Hole")

Surgery can be done under local or general anaesthetic. It can be combined with cataract surgery if necessary.

Frequently Asked Questions

How successful is treatment with Ocriplasmin and what is the advantage?

35% of vitreomacular traction cases will be relieved by Ocriplasmin. For patients with macular hole 40% of holes are successfully closed with injection. 10% of patients with Ocriplasmin injection for vitreomacular traction with or without macular hole will experience significant visual improvement (an ability to read 3 more lines on an eye chart).

However 5.6% will have significant deterioration of vision (loss of 3 or more lines on an eye chart) usually due to worsening of vitreomacular traction which may require surgery. The improvement in symptoms of visual distortion is difficult to quantify. The advantage is that Ocriplasmin is a quick easy treatment that can be performed in the eye clinic, whereas surgery involves an operation that can last over 1 hour, followed by 5 days of maintaining a face-down position. The eye is filled with gas at surgery which limits vision for 4 to 6 weeks.

What can be done if Ocriplasmin doesn't work?

A further Ocriplasmin injection will not be given. The options would be to do nothing or to have surgery in the form of a vitrectomy.

How successful is surgical treatment (vitrectomy) for the treatment of vitreomacular traction and macular hole?

At Torbay Hospital the success rate with one operation for closure of macular holes in the specific group of patients eligible for treatment with ocriplasmin has been 100% since 2009 (57 patients) and half of patients can expect to achieve driving vision (48%). Overall for all macular holes the success rate has been 97% (92 patients). At Torbay surgery has been conducted for 15 patients with vitreomacular traction since June 2009 but none of these would have been eligible for Ocriplasmin treatment because the patients had other coexisting eye conditions. In all cases vitreomacular traction was successfully relieved. The other advantage of vitrectomy is that all floaters are removed.

What are the side effects of Ocriplasmin or Surgery for Vitreomacular traction and Macular Hole

The greatest concern for patients undergoing treatment for vitreomacular traction and macular hole is the potential for the treatment to cause retinal detachment. In the 107 patients with vitreomacular traction or macular operated at Torbay since June 2009 there have been no retinal detachments. However 2 patients have had complications – one with a haemorrhage in one of the layers of the eyeball that we call the choroid. This settled well without treatment with a very good outcome.

Another patient developed a high pressure in the eye requiring a further operation which was successful and again achieved a good outcome. Cataract often occurs after vitrectomy operation. With this in mind if there is any cataract present before surgery your surgeon will offer you a combined cataract operation and vitrectomy.

High pressure in the eye occurs quite frequently but apart from one case described above has been transient and controlled with eye drops. For other potential side effects of vitrectomy see information sheet on Macular Hole from BEAVRS (the British and Eire Association of Vitreoretinal Surgeons).

For Ocriplasmin there is a 1% rate of retinal detachment. 8% of patients will experience severe visual loss which is usually transient but in some is permanent. In vitreomacular traction patients without macular hole, 7% of patients will actually develop a macular hole as a complication of Ocriplasmin treatment. There have also been side effects of lens instability. This means the lens inside your eye can move away from the central location behind the iris. This is thought to occur because Ocriplasmin damages the fine hair-like ligaments that hold the lens in the correct place. There have been 2 reported cases in research studies, and concerns have been expressed that ocriplasmin might increase the chance of complications if a patient has cataract surgery at any time in the future. In animal studies 2 doses (achieving 1.4 times the concentration given to humans) given to monkeys caused complete dislocation of the lens in 100% of the treated eyes.

1 in 50 patients will report a yellow tinge to vision after treatment and in most cases this resolves. Vitreous floaters are very common after Ocriplasmin treatment (and don't occur after vitrectomy) but may improve with time.

Other complications are rare with either treatment such as infection which can be bad for the vision (less than 1 in 1000) or double vision (which is usually transient).

We are hoping that further information on safety will become apparent as Ocriplasmin is used more.

You will have an opportunity to discuss this treatment further with a doctor when you attend the eye clinic