

Ophthalmology Department

Macular Swelling due to Retinal Vein Occlusion

This leaflet has been provided for you because you have had a blocked blood vessel at the back of the eye. This is called a retinal vein occlusion (RVO). Your vision is blurred due to this and possibly due to swelling of the central part of the retina - the macula, this part of the retina gives you high quality vision. The medical term for this is macular oedema, it can cause blurred or distorted vision and can lead to loss in vision.

Unfortunately, there is no cure to treat the disease caused by a clot blocking one of the veins on the back of the eye. That would have resolved the problem. However, there are injections that we do inside the eye - in the jelly of the eye to try and reduce the macular oedema and keep the retina as healthy as possible. This could be a course of 3 injections or even less but sometimes is long-term multiple injections treatment to try to keep the macula dry.

Every treatment has risks associated with it. This leaflet is designed to give you an understanding of the pros and cons of each treatment, so you have some background information.

Your eye doctor will help you to know about your condition, answer any questions and advise you on any specific risk factors personal to you that may determine a particular treatment being more suitable than another.

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There are two classes of drug treatment at present, anti-angiogenic drugs called anti-vascular endothelial growth factor (anti-VEGF) and steroids intra-ocular implants.

What are the treatment options?

Anti-VEGF

Anti-VEGF drugs are administered via an injection into the eye. They work by stopping the leakage of blood vessels on the back of the eye to prevent further damage to the retinal cells in the macula and prevent deterioration of vision.

What vision benefit can I expect from anti-VEGF?

The approximate percentage of patients who gained significant improvement in vision is around 50% at 12 months.

There are two anti-VEGF drugs available on the NHS:

Ranibizumab and its biosimilars and Eylea - aflibercept, are currently licensed for use on the NHS for swelling of the macula due to retina vein occlusion (RVO). It is delivered with an intra-vitreous injection to the eye. The risks specific to the drug are very rare. This includes possible severe inflammation in the eye and uncertain risks of strokes or heart attacks. Most of the recent trials could not verify the results of earlier trials that showed that there is a small risk of causing you a stroke or heart attack by administering anti-VEGF medications. Recent guidelines from the Royal College of Ophthalmologists advised to say to patients that the risk of strokes and heart attacks are uncertain.

It is important to remember that the mean age group that gets retinal vein occlusions and the associated risk factors of high blood pressure, raised cholesterol and blood glucose, is the same group that is more prone to developing strokes and heart attacks, therefore if this unfortunate event occurs after an injection, it would be very difficult to say that it would not have occurred without the injection.

Risks related to the injection include infection, damage to the lens and retinal detachment - all are rare. In the UK, 1 in 4000 patients develops sight-threatening infection in the eye due to intra-vitreous injections of anti-VEGF.

How often will you require treatment with Anti-VEGF?

The treatment of retinal vein occlusion is very individual and the response to treatment is variable among patients. Some patients do not require any treatment, while others require very intensive frequent injections regimes every 4 to 6 weeks. Between the above two scenarios, there is a large range of variation between injections. Your doctor will advise you about different plans depending on your condition.

Ozurdex Biodegradable Dexamethasone Implant.

It is also an intra-vitreous injection as anti-VEGF however, the needle is thicker. It provides slow release of the active drug - a steroid called Dexamethasone that lasts between 4 to 6 months. The treatment is administered every 4-6 months on average (and sometimes much longer intervals) for as long as the macular swelling keeps developing. You will also be required to attend the eye clinic for monitoring in between injections as around 25% of patients having Ozurdex injection might get high pressure in the eye, sometimes requiring treatment with hypotensive eye drops to control the eye pressure. Rarely about 0.5% of patients of those who develop high pressure in the eye require glaucoma surgery. Uncontrolled eye pressure can lead to glaucoma and deterioration of vision over time. Your eye pressure will be monitored for this reason.

A patient who has established glaucoma **may** not be suitable for this treatment as it may make the control of the intraocular pressure difficult. This will be discussed on a case to case basis with yourself balancing the risks and benefits.

Another side effect is the progression of cataract requiring surgery, this often happens after a few injections (2 or more). Risks associated with the injection itself are rare like risk of sight threatening infection in the eye and retinal detachment.

Laser Treatment for certain types of retinal vein occlusion

In very specific circumstances, macular laser treatment might be an option in **Branch** Retinal Vein Occlusion (BRVO). It does not work in macula oedema caused by central retinal vein occlusion.

Risks due to laser include: Visible black spot / blur in central vision due to laser scars, failure to resolve the swelling, loss of sight from accidental damage to the macula.

The injection

Before the injection, both you and your eye doctor will need to sign a consent form following discussion of your case, available treatment options, risks and benefits. The whole injection process takes a few minutes but the injection itself is done over in a few seconds. It is given in a clean, comfortable purpose built room while lying on a couch. The eye is first made numb with eye drops. The eyelids and surface of the eye are cleaned first with iodine to reduce the risk of infection. During the injection, you will feel a prickle or a pressure type sensation similar to the prickle you feel when giving blood for blood tests.

Risks that are common to all injections treatment options

1. Conjunctival bleeding on the surface of the eye - often painless, and resolves with no treatment within 1-2 weeks.
2. Corneal abrasion that gives you pain shortly after the injection for about 24-48 hours until it heals completely. Please use frequent 6-8 times a day preservative free lubricating drops (artificial tears) if this happens.
3. Infection inside the eye that might cause loss of vision (endophthalmitis) very rare.
4. Bleeding into the gel of the eye.
5. Lens touch or damage leading to the formation of cataract (clouding of the lens within the eye). This would require complex cataract surgery.
6. Raised intraocular pressure leading to glaucoma (more common in the Ozurdex group).
7. Retinal detachment.
8. Hypotony (reduced pressure in the eye).

The RVO Clinic Visit

In order to determine suitability of a treatment and the effect of your treatment, certain tests need to be undertaken on arrival to the eye clinic.

1. A test of visual acuity using a letter chart.
2. An OCT scan (Optical Coherence Tomography): This is a non-invasive test that takes a snapshot of the macula to determine the amount of leakage present.
3. An eye pressure check using tonometer - a smooth plastic cone that touches the surface of the eye after administering eye drops to numb the eye.

Your appointment time in the clinic will vary as on some days you will require more tests/procedures than other days. In order to provide the most suitable treatment as a one stop service, we request that you bear with us.

In case of emergency if you have concerns after injections, have any comments about this leaflet or the service you have received please contact:

**Sister Ophthalmology Department
Telephone: 01484 344367 or 01484 355085**

www.cht.nhs.uk

If you would like this information in another format or language contact the above.

Potřebujete-li tyto informace v jiném formátu nebo jazyce, obraťte se prosím na výše uvedené oddělení

Jeżeli są Państwo zainteresowani otrzymaniem tych informacji w innym formacie lub wersji językowej, prosimy skontaktować się z nami, korzystając z ww. danych kontaktowych

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