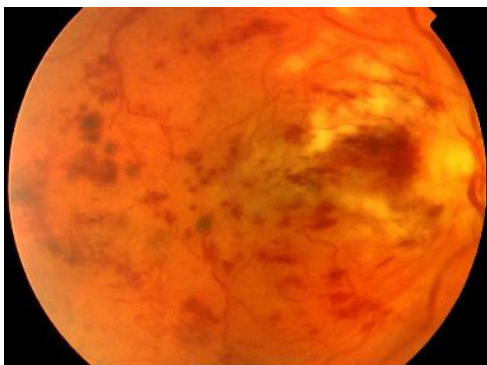


Central Retinal Vein Occlusion (CRVO) - Patient Information

What is CRVO?

The retina is a thin layer of light sensitive cells lie at the back of the eye. Generally the retina is between 90 and 200 thousandths of a millimetre. It is fed by a central artery and drained by a vein. As the artery and vein cross in the nerve, the artery can press on the vein and cause a blockage. Blood then seeps out of the retinal veins and into the retinal tissue, blockage of blood flow also causes retinal swelling and in severe cases complete loss of function. In these cases the retina may release a hormone called vascular endothelial growth factor (VEGF), to stimulate new blood vessel formation. Abnormal blood vessels may form on the retina and in the drainage angle of the eye. CRVO is a relatively common cause of visual loss occurring in 1:200 patients over 65yrs of age, and is often associated with Glaucoma.



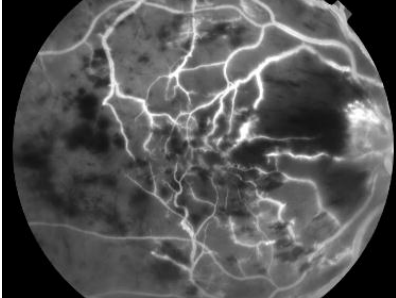
CRVO Right Eye, the veins are dilated and the retina has blood specks in all areas.

What are the symptoms of a CRVO?

The typical symptom is sudden, painless visual loss. This usually occurs on waking and can be mild or very severe. The vision slowly recovers in about 1/5 of patients, stays the same in 2/5 and can deteriorate in 2/5. In 80% of patients the blockage is mild and but vision can be lost due to retinal swelling at the macula. In 20% of patients the blood flow can be very severely affected (ischaemic CRVO) and the vision can deteriorate. In these patient glaucoma (a sudden and painful rise in eye pressure) can occur three months following the initial visual loss.

How is a CRVO assessed?

The degree of retinal damage is assessed with visual function tests, fluorescein angiography and with optical coherence tomography (OCT). We measure the area of capillary blockage and if it is greater than 10 disc areas then laser treatment may be required. Blood tests to detect causes of CRVO will also be taken. CRVO is associated with high blood pressure, high cholesterol and lipids, diabetes, leukaemia, smoking and inflammatory diseases.



Fluorescein angiogram of a severe CRVO

What is the treatment of mild CRVO?

Treatment of mild CRVO depends on its severity and how long it has been in place. All patients will be asked to have a health check with their GPs. Patients with very mild CRVO may need no eye treatment. Patients with visual blurring due to swollen retina, do not do well with laser but can do well with an injection of Triamcinolone a long acting steroid. This reduces the swelling and but can put the pressure in the eye up as well as give cataract.

Are there any new treatments?

Other treatments such as Lucentis and Avastin injections have also been used in this type of retinal vein occlusion. They are antibodies to the local hormone VEGF, which causes retinal leakage. However the early trials show little long term efficacy. In some patients retinal surgery can help.

In Southampton we have been looking at a long acting steroid called Posudex, which seems to control leakage over a 6 month period. Early results are promising however we need to wait for results later this year to find out how good it is.

What is the treatment of severe (ischaemic) CRVO?

In this type of disease there is generally little that we can do for the central vision. The aim is to prevent new blood vessels growing and bleeding into the eye, and also to prevent glaucoma that can blind the eye. We do this by scatter retinal laser treatment, which may have to be repeated several times. If the pressure goes despite this then further laser treatment or possibly laser surgery is necessary.

Are there any risks of treatment?

Some patients develop a retinal detachment, which can reduce vision dramatically. If detected early these can also be operated on and vision restored. Other risks include infection of the eye, and reoccurrence of the CRVO.

Is a CRVO the same as macular degeneration?

No, although CRVO only affects the retina, in macular degeneration blood vessels under the retina leak. However symptoms of blurred vision are similar in both conditions, CRVO does not generally cause complete loss of central vision.

What are the chances of a CRVO in the other eye?

The risk of developing a CRVO in your other eye is relatively small, however the risk of developing a CRVO in the other eye around 5% per year.

Can I prevent a CRVO forming in the other eye?

This is a difficult question. However it is certainly worth controlling blood pressure, lipids, cholesterol, diabetes, underlying glaucoma that may be present. Giving up smoking is also key to preventing problems in the other eye.

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