

Central Retinal vein occlusions:

Retinal vein occlusions are the second most common type of retinal vascular disorder after diabetic retinal disease

They can occur at almost any age (though typically in middle to later years - most over 65 years) and their severity ranges from asymptomatic to a painful, blind eye

This is a common condition with an incidence of approximately 2 per 1,000 in those >40 years and 5.4 cases per 1,000 aged >64 years

There is an equal sex distribution

Patient frequently presents with sudden unilateral painless loss of vision or blurred vision, often starting on waking up

Central retinal vein occlusion (CRVO) has 2 broad categories, which may overlap:

The milder form of the disease is *non-ischaemic CRVO* (accounting for ~75% of CRVOs). This may resolve fully with good visual outcome or progress to the ischaemic type

The severe form of the disease is *ischaemic CRVO*. Patients may be left with with a type of glaucoma called neovascular glaucoma and a painful blind eye

In some cases, the cut-off between the two can be arbitrarily based on angiographic(examination of the retinal blood vessels using an imaging modality) findings but it is a useful predictor of outcome and complication development.

Non-ischaemic :

There are wide-spread dot-blot and flame haemorrhages throughout the retina and some swelling of the disc (part of the optic nerve)

Ischaemic :

Presents with severe visual impairment . The retina looks similar to the non-ischaemic type but optic disc swelling is more severe. Haemorrhages scattered throughout the retina in typical blood-storm pattern with cotton-wool spots (a sign of severe retinal vascular impairment to the retinal nerve fibers)

Complications:

Retinal neovascularisation (new blood vessels that cause glaucoma and bleeding inside the eye)

Macular(central part of the retina) swelling

Macular hole

Cellophane maculopathy (small membrane that grows on the retina)

Optic atrophy

Management:

Currently, there is no treatment that can reverse the blocked vein. The aims of treatment are to detect and treat any underlying risk factors for the condition and also to detect and treat any complications where possible.

Treatment of any underlying risk factors that include:

- High blood pressure
- Raised cholesterol levels
- Good control of diabetes
- Giving up smoking if you are a smoker
- Blood clotting disorders or rare blood problems
- Diagnosis and treatment of glaucoma

Treatment of any complications:

Someone with retinal vein occlusion needs close follow-up so that any complications can be picked up early and treated where possible.

Laser treatment can be used to help treat both macular swelling and abnormal blood vessel development

A different kind of laser can be used where the vein occlusion causes new blood vessels leading to glaucoma

Various new treatments are being researched:

For example, steroid injections into the eye (the damaged retina becomes inflamed and steroids may help to reduce inflammation)

A chemical called vascular endothelial growth factor (VEGF) is released by the damaged retina. Research into anti-VEGF drugs is also taking place

Following a central retinal vein occlusion:

You are likely to be left with some visual loss. The extent of the visual loss can vary greatly, depending on the severity and exact site of the vein occlusion

Early diagnosis and treatment of retinal vein occlusion and any complications may make a difference to the eventual level of visual loss

However, severe vein occlusions can cause permanent visual loss, even if treated very early

Retinal vein occlusion may recur in either the same eye or in the other eye