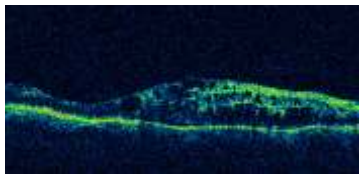
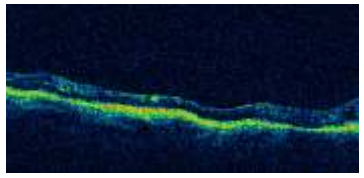
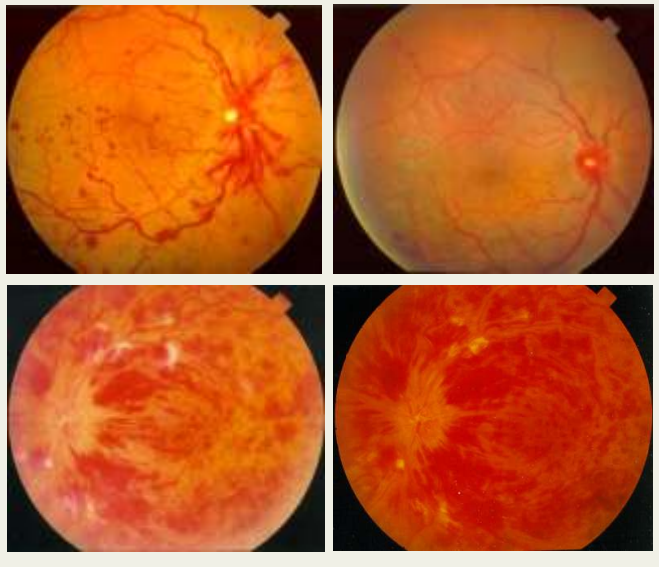


OCT SHOWING
MACULAR EDEMA



RESOLVED EDEMA
AFTER AVASTIN INJECTION

Central Retinal Vein Occlusion



Chances of Visual Recovery (Prognosis):

Visual recovery depends upon

- Type of Occlusion
- Site of Occlusion
- Whether the macula has been involved or not
- Duration of occlusion
- Associated diseases like high blood pressure and glaucoma etc.

Care to be taken by the patient:

- Regular follow up of retinal surgeon to examine the progress/regress of disease.
- Immediate consultation if same happens to other eye.
- Regular checkup and proper control of blood pressure and glaucoma.

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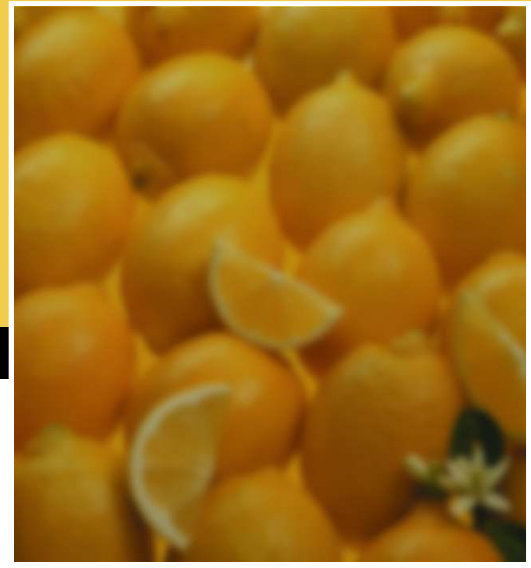
RETINAL VEIN OCCLUSIONS



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Putting 'EYE' before 'I'

Specialist in Diseases of Vitreous & Retina
Lasers & Ultra Sonography & Microsurgery of Eye

Retinal vein occlusions are the most common retinal diseases seen in clinical practice. Recognition of these diseases is important as their complications can lead to lots of vision problems. Timely intervention can substantially reduce the incidence and severity of these complications. Also, improved treatment of underlying medical problems can lead to better quality of life.

Introduction to Retinal Circulation and their obstructions:

Retina the main part of visual sensation has got numerous blood supply through retinal vessels. "Retinal arteries" bring the blood from heart to the retina while "Retinal veins" drain the blood from the retina towards the heart. There is one main Central Retinal Artery (CRA) and one main Central retinal vein (CRV). They give origin to numerous branches.

There may be an obstruction to the blood flow in retinal veins either branches or central. These are one of the common causes of vascular problems in retina. Because of this obstruction, blood drainage from retina to heart is hampered. "Branch Retinal Vein Occlusion" or BRVO denotes obstruction of this blood flow in small branches of retinal veins while "Central Retinal Vein Occlusion" or CRVO denotes obstruction of blood flow in the main and large vein of the retina.

Common Causes:

- Increased blood pressure, which is not in proper control or is fluctuating. High serum lipids or cholesterol and diabetes
- High intra ocular pressure what we call as glaucoma.
- In many patients, the cause is not known, known as Idiopathic.
- There are many other uncommon causes.

Mechanics of Obstruction:

In the retina, arteries and veins cross at many locations. In case of high blood pressure, arteries become rigid and hard and they cause pressure over the soft veins at the point of crossing, so blood flow from these veins is obstructed.

What symptoms will patient get?

- In BRVO, if only a small portion of peripheral retina is involved then it may not give any symptoms.

- If BRVO involves the Macula or the center of the retina then the patient will have sudden drop in vision and will have a black shadow in his main or central part of the field.

- In CRVO the patient could have a varying degree of visual loss ranging from mild visual disturbance to sudden drop or loss of vision depending upon the type of CRVO.

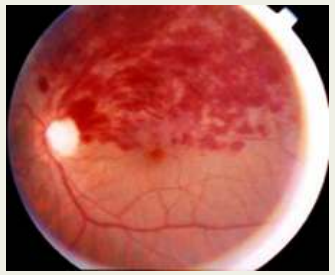
Management of these cases:

These patients need to be examined by a retinal surgeon and detailed examination has to be done to find the cause and to see if any changes have occurred. In some cases, Fundus Fluorescein Angiography (FFA) may be necessary to know the site of obstruction or leakage and if any other changes have occurred. OCT is done to study the details of the macula.
Patient may develop macular edema that is fluid collection in the macula (central part of the retina).

After few months, some patients may develop new vessels on the retina or on the iris as a response to the less blood or oxygen to the retina which may lead to serious complications like vitreous hemorrhage, retinal detachment, rubeosis iridis or secondary glaucoma.

The patient needs to be followed up regularly and need to be treated as and when the complications occur. This may involve LASER and/or surgery and/or intravitreal steroid injection and intravitreal antiVEGF drugs like avastin, Macugen or Lucentis injections.

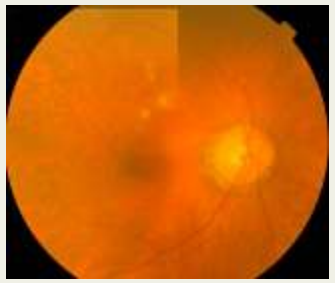
Branch Retinal Vein Occlusion



BEFORE TREATMENT

AFTER LASER TREATMENT

BEFORE
STEROID INJECTION



AFTER
STEROID INJECTION