

## RETINA CONSULTANTS OF WESTERN NEW YORK

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### Central Retinal Vein Occlusion

#### What Is It?

- The eye has blood vessels that bring blood into the eye (**artery**) and those that take the blood away from the eye (**vein**).
- The main blood vessel that takes the blood away from the eye (**central retinal vein**) has been clogged.
- Due to the clogging, the blood in the vein flowed back and leaked out and into the retina.
- This has caused significant damage to the retina.
- Our goal is to help the body absorb the blood and to minimize any further damage.
- Central retinal vein occlusion is most commonly due to diabetes and hypertension. Therefore, close follow-up with your primary care physician is recommended soon. Other causes are also possible.
- In response to the blood vessel damage, the body can create new blood vessels (**neovascularization**) which can break and bleed.
- This can occur on anywhere on the eye (especially retina and iris) and can lead to vitreous hemorrhage, retinal detachment, and glaucoma among other conditions.
- If glaucoma occurs, then a referral to glaucoma specialists will be required.

#### Analogy

- Imagine a tunnel with one lane going into the city and one lane coming out of the city. Certain medical conditions cause the lane coming into the city to expand. Since the lanes are going through a tunnel, they cannot expand. As a result, the lane coming out of the city is squeezed and it narrows. This will cause a back up and some of the cars may leave the highway.
- In the same way, the arteries and veins travel through a sheath which can not expand. Therefore, when the artery expands, the vein will be squeezed. This will cause a backward pressure and blood will leak into the eye. This is what happens in patients with high blood pressure.

#### Treatment Options

- Technology is not yet present to reverse the damage that has been done by the bleeding. Therefore, your vision may not improve. Our goal is to first minimize any further damage and maximize any potential improvement.
- Options include laser or intravitreal Avastin/kenalog.triessence injection to help stabilize the leaking vessels or bleeding new vessels.
- Sometimes, the body responds to blood vessel damage by creating new blood vessels (**neovascularization**). However, these vessels are fragile and they will break and bleed.

- If such new blood vessels develop, then a second type of laser treatment called panretinal photocoagulation/quadrantic laser or intravitreal injections may be needed to help minimize this condition.

### **Laser Treatment**

- The leaking vessels can be induced to close with laser. This will take about 10 minutes with minimal pain. This treatment is called **focal/grid laser** therapy.
- The new blood vessels can't be destroyed with laser. Laser will help to lessen the chances of other new fragile vessels from forming. This procedure will take 20-30 minutes and may involve pain. This treatment is called **panretinal photocoagulation (PRP)**.
- Your vision will be darker for the remainder of the day after a laser treatment. Please take the appropriate precautions.
- Each treatment may need to be repeated several times.

### **Intravitreal Injection**

- Additional medications may be injected directly into the eye if the laser is ineffective or not of the type that would respond to laser treatment.
- **Kenalog/Triessence/Avastin** are the medications that are usually injected into the eye.
- These help to stabilize the leaking blood vessels.
- No one can predict the number of injections that will be required. We will monitor you with the appropriate testing.
- After the injection, you may see the medication or air bubbles floating in the form of dark clouds/shadows or spheres which may interfere with normal daily activities. These will improve gradually over the next 1-2 weeks.
- After the injection, the eye will feel irritated with burning sensation and you may feel as if there is something in the eye for 3-4 days.
- Antibiotic eye drops will need to be taken 4 times per day for the next 5-7 days. Artificial lubricating tears can be used to help to reduce irritation.
- Please call if you have any questions. There is someone on call 24/7.
- Call especially if you begin to experience any decrease in vision, eye pain, swelling around the eye. In general, it is advised that you call for any of the listed symptoms worsen or you think are worse than they should be.
- The risks include infection, bleeding, retinal tear/detachment, loss of vision or eyeball.