

Retinal Vein Occlusions (Initial Evaluation and Therapy)

Initial Exam (Key elements)

- Ocular history (e.g., glaucoma, other ophthalmologic disorders, ocular injections, surgery, including retinal laser treatment, cataract surgery, refractive surgery)
- Location and duration of vision loss
- Current medications
- Systemic history (e.g., systemic hypertension, diabetes, hyperlipidemia, cardiovascular disease, sleep apnea, coagulopathies, thrombotic disorders, and pulmonary embolus)

Physical Exam (Key elements)

- Visual acuity
- Measurement of IOP
- Slit-lamp biomicroscopy to detect fine abnormal new iris vessels
- Dilated examination of the far peripheral retina with indirect ophthalmoscopy
- Gonioscopy prior to pupil dilation; especially in cases of an ischemic CRVO, when IOP is elevated, or when iris neovascularization risk is high
- Binocular fundusoscopic evaluation of the posterior pole

Diagnostic Tests

- Color fundus photography to document retinal findings
- Fluorescein angiogram to evaluate the degree of vascular occlusion
- Optical coherence tomography to detect macular disease
- Ultrasonography (e.g., when vitreous hemorrhage is present)

Care Management

- Best prevention is to manage risk factors aggressively by optimizing control of diabetes mellitus, hypertension, and hyperlipidemia (*I+*, *GQ*, *SR*)
- Participants who received a 4-mg corticosteroid treatment dose had higher rates of cataract formation, cataract surgery, and elevated IOP, indicating a preference for a 1-mg dose (*I++*, *GQ*, *SR*)

- Multiple studies have demonstrated the efficacy of anti-VEGF agents in the treatment of macular edema associated with BRVO (*I++*, *GQ*, *SR*)
- Randomized controlled studies have shown the efficacy of anti-VEGF agents in treating macular edema related to CRVO (*I++*, *GQ*, *SR*)
- Betadine antiseptic drops and a lid speculum are recommended during all intravitreal injections (*III*, *MQ*, *DR*)
- Intravitreal triamcinolone, dexamethasone, and other corticosteroids have been shown to be efficacious for macular edema associated with CRVO, yet there are known associated risks of cataracts and glaucoma (*I+*, *GQ*, *SR*)
- Laser treatment remains a viable treatment in eyes with BRVO, even if the duration of the disease is greater than 12 months (*I+*, *GQ*, *SR*)
- Sectoral pan retinal photocoagulation is still recommended for neovascularization when complications such as vitreous hemorrhage or iris neovascularization occur (*I+*, *GQ*, *SR*)
- Ophthalmologists caring for patients with retinal vascular occlusion should be familiar with specific recommendations of relevant clinical trials due to the complexity of diagnosis and treatment (*I++*, *GQ*, *SR*)

Patient Follow-up

- Ophthalmologist should refer patients with an RVO to a primary care physician for appropriate management of their systemic condition and communicate results to the physician managing the patient's ongoing care (*I+*, *GQ*, *SR*)
- Risk to the fellow eye should be communicated to both the primary care provider and the patient (*I+*, *MQ*, *SR*)
- Patients whose conditions fail to respond to therapy and when further treatment is unavailable should be provided with professional support and offered a referral for counseling, vision rehabilitation, or social services as appropriate (*I++*, *GQ*, *SR*)