



# Role of Anticoagulation in Preventing Retinal Damage in Central Retinal Vein Occlusion

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## DESCRIPTION

Central Retinal Vein Occlusion (CRVO) is a vascular disorder that affects the retina of the eye. It is a common cause of sudden vision loss, and it can occur at any age. CRVO is caused by the blockage of the central retinal vein, which is responsible for draining the blood from the retina. The blockage can occur anywhere along the vein, leading to increased pressure within the vein and subsequent damage to the surrounding retinal tissue. In this article, we will discuss the use of therapeutic level of anticoagulation in the treatment of CRVO. Pathophysiology of Central Retinal Vein Occlusion The pathophysiology of CRVO is complex, but it involves the obstruction of the central retinal vein, which leads to increased pressure within the vein and subsequent damage to the retinal tissue. The obstruction can occur due to various reasons, including compression of the vein by a nearby artery, thrombosis, or inflammation. The resulting increased pressure within the vein can cause blood to leak into the surrounding tissue, leading to edema and ischemia. The retinal tissue is highly sensitive to ischemia, and prolonged ischemia can lead to permanent damage and vision loss. The damage caused by CRVO can be classified into two types: non-ischemic and ischemic. Non-ischemic CRVO is characterized by mild vision loss, whereas ischemic CRVO is associated with severe vision loss due to extensive damage to the retinal tissue. Clinical Presentation of Central Retinal Vein Occlusion CRVO can present with a variety of symptoms, including sudden painless vision loss, blurred vision, and distortion of vision. The severity of the symptoms depends on the extent and location of the blockage within the central retinal vein. In non-ischemic

CRVO, the symptoms are usually milder, and the patient may have only mild vision loss. In contrast, in ischemic CRVO, the symptoms are severe, and the patient may have complete vision loss in the affected eye. Diagnosis of Central Retinal Vein Occlusion The diagnosis of CRVO is based on the clinical presentation and findings on the eye examination. The eye examination may reveal retinal edema, retinal hemorrhages, cotton wool spots, and dilated veins. Fluorescein angiography may be performed to identify the location and extent of the blockage within the central retinal vein. Optical Coherence Tomography (OCT) may also be used to assess the extent of retinal edema. Treatment of Central Retinal Vein Occlusion The treatment of CRVO depends on the severity of the condition and the extent of the retinal damage. In non-ischemic CRVO, the treatment is mainly supportive, and the patient is advised to rest and avoid activities that may increase the intraocular pressure. In contrast, in ischemic CRVO, aggressive treatment is required to prevent further damage to the retinal tissue. The use of therapeutic level of anticoagulation in the treatment of CRVO has been a topic of debate among ophthalmologists. The rationale for using anticoagulation is to prevent the formation of blood clots within the central retinal vein, which can exacerbate the retinal damage. However, the use of anticoagulation is associated with an increased risk of bleeding, which can further damage the retinal tissue. Several studies have evaluated the use of anticoagulation in the treatment of CRVO. The Central Vein Occlusion Study (CVOS) was a randomized clinical trial that evaluated the efficacy of anticoagulation in the treatment of CRVO.

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