



Glaucoma and its Association with Diabetic Retinopathy

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DESCRIPTION

The optic nerve may be harmed as a result of the eye disorder Glaucoma. The health of the eyes depends on this nerve. Damage to it may result in blindness in certain situations and irreversible visual loss in other cases. Glaucoma is frequently brought on by high intraocular pressure. A risk factor for Glaucoma, however, might also be Diabetes. A risk factor for primary open-angle Glaucoma is type 2 diabetes [1]. If a person is diagnosed with type 2 diabetes, an ophthalmologist should have been contacted to check for any symptoms of Diabetic retinopathy, a condition in which high blood sugar destroys the blood vessels in the Retina. A yearly dilated exam should be performed on diabetic patients as well to check for any Glaucoma symptoms [2]. The same as for non-diabetic individuals with open-angle glaucoma, diabetic people with primary glaucoma are treated by decreasing ocular pressure with drugs, laser treatment, and surgery if necessary. Receive the necessary care, ideally sooner rather than later, to limit the effects of diabetes on vision. The chances of having better results increase dramatically if patient can identify the diabetes-related vision issues that patient is experiencing or identify early warning signals with preventative testing.

The capacity of human body to keep blood sugar levels regular is harmed by diabetes. Human body need a certain amount of blood sugar to function, but if it rises too high, major organs and other key systems may be placed under stress. Eye concerns associated with diabetes are quite serious. Blood sugar levels that are too high can harm the Retina, which is located in the backside of the eye. Blindness may occur a few years after untreated Diabetic Retinopathy. Blood vessels of eyes may suffer as a result, which patient can notice the chance of getting Glaucoma after receiving a diabetes diagnosis is also doubled. Glaucoma has the potential to severely damage vision or even render completely or partially blind if untreated [3].

Diabetic retinopathy comes in two different forms Acute Diabetic retinopathy and Non Proliferative Diabetic Retinopathy (NPDR), the more prevalent variety, is marked by the lack of new blood vessel growth .The retinal blood vessel walls

deteriorate when the patient have NPDR. Small protrusions from the smaller arteries' walls can periodically leak fluid and blood into the retina. The diameter of larger retinal vessels can also start to enlarge and change. NPDR can worsen when more blood vessels are blocked; going from mild to severe. There may occasionally be an accumulation of fluid (edema) in the macular region of the retina as a result of retinal blood vessel injury. Treatment is needed if macular edema impairs vision in order to prevent irreversible vision loss. Proliferative diabetic retinopathy is a more serious form of diabetic retinopathy that can develop [4]. As the damaged blood vessels close off, this kind causes the creation of new, aberrant blood vessels in the retina. The transparent, jelly-like fluid that fills the center of eye can leak from these new blood vessels because they are weak (vitreous).The retina may eventually separate from the rear of the eye as a result of scar tissue produced by the development of new blood vessels. The eyeball may become compressed if the fresh blood vessels obstruct the usual drainage of fluid from the eye. The optic nerve, which transmits images from eye to brain, may become damaged and, leading to glaucoma.

Ophthalmologist will check patient eyes for glaucoma symptoms by assessing a number of eye health factors, including

- Eye strain
- Angle of eye drainage
- Ocular nerve
- Periscope perception
- Eyeball thickness
- Treatment for Glaucoma

Patients Glaucoma's severity will determine treatment strategy. Options for treatment includes

In the early stages of Glaucoma, eye drops are frequently the first line of defense. These eye drops work by increasing fluid outflow and/or decreasing fluid production to lower eye pressure. Minimally invasive Glaucoma surgery It functions to either remove or open the tissue at the base of the cornea so that fluid can drain, lowering IOP, and is a viable treatment for less severe instances of glaucoma. Argon Laser Trabeculoplasty (ALT) is frequent laser procedure for treating glaucoma works by clearing

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obstructions in the drains so that fluid may exit more readily. It usually takes two treatments to effectively treat Primary Open Angle Glaucoma (POAG), with ALT being applied to one half of the body [5].

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