

Open angle Glaucoma: Causes of Open Angle Glaucoma and Prevention

Dr. Abraham Nai

National University of Pharmacy, Ukraine

Abstract

Glaucoma has been one of the world's greatest challenges in medicine. Glaucoma is a group of eye related diseases which causes damage to the optic nerve and in the long run affecting vision or causing vision loss. Open angle glaucoma is damage to the optic nerve, usually caused by high intraocular pressure. Open angle glaucoma falls under the types of glaucoma. There are typically no early warning signs or painful symptoms of open angle glaucoma. It develops slowly and sometimes without noticeable sight loss for many years. Open angle glaucoma is the most common form of eye diseases.

The glaucoma is a group of optic neuropathies characterized by progressive degeneration of retinal ganglion cells. These are central nervous system neurons that have their cell bodies in the inner retina and axons in the optic nerve. Degeneration of these nerves results in *cupping*, a characteristic appearance of the optic disc and visual loss.¹ The biological basis of glaucoma is poorly understood and the factors contributing to its progression have not been fully characterized.

Glaucoma affects more than 70 million people worldwide with approximately 10% being bilaterally blind, making it the leading cause of irreversible blindness in the world. Glaucoma can remain asymptomatic until it is severe, resulting in a high likelihood that the number of affected individuals is much higher than the number known to have it. Population-level surveys suggest that only 10% to 50% of people with glaucoma are aware they have it.

Glaucoma's can be classified into 2 broad categories: open-angle glaucoma and angle-closure glaucoma. In the United States, more than 80% of cases are open-angle glaucoma; however, angle-closure glaucoma is responsible for a disproportionate number of patients with severe vision loss. Both open-angle and angle-closure glaucoma can be primary diseases. Secondary glaucoma can result from trauma, certain medications such as corticosteroids, inflammation, tumour, or conditions such as pigment dispersion or pseudo-exfoliation.

This causes pressure in the eye to gradually increase. This pressure gradually damages the optic nerve. Main aim is to create awareness or enlighten people about open angle glaucoma. It is recommended that individuals or persons before age 40 should check for open angle glaucoma (OAG) every two to four years, age 40 to 54 every one to three years, 55 to 64 every one to two years and after age 65 every six to 12 months, even though in cases of high risk, it is recommended much more frequently. With this analysis, we can deduce that risk of OAG increase with age. A regular program of moderate exercise will benefit your overall health and studies have shown that moderate exercise such as walking or jogging three or more times every week can have an intraocular pressure lowering effect. Spinach and other green leafy vegetables or supplements rich in antioxidants can also help with OAG due to presence of vitamins C, E, A and zinc which is good for protecting vision. Treatment of OAG may differ from one patient to the other in selective laser trabeculoplasty (SLT), drainage implant surgery and non-penetrating surgery in severe cases.

Biography

Abraham Nai is currently pursuing Masters from the National University of Pharmacy. He has participated in a research work on tattoos and their side effects on cells of the human body. Currently he is working with Professor Filiptsopva Olga Volodymyrivna on tissue culture.

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