Open-Angle Glaucoma

Open-angle glaucoma is characterized by having full access to the trabecular meshwork (an open angle in the anterior chamber of the eye), but issues with aqueous humor flowing through it. There is primary open-angle glaucoma, the most common form, for which the mechanism is unclear. Secondary open-angle glaucoma occurs when WBC's, RBC's and retinal products are unable to be filtered and obstruct aqueous flow.

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Humor Has Access to Trabecular Meshwork
Fluid has Access to Trebeck in Mesh
Open-angle glaucoma is unique as the angle of the anterior chamber is open, where there is access to the trabecular meshwork. This differs from closed-angle glaucoma, in that there is no structural obstruction of the trabecular meshwork from the iris.

Presentation

Painless
No Pain-bolts sign
Open-angle glaucoma is typically painless and is not a complaint which is presented to physicians. Due to this, it is often an incidental finding on eye exam.

African American
African American
Open-angle glaucoma has a higher prevalence in African Americans, thus older patients of this race should be screened.

Elderly
Old-person
The development of open-angle glaucoma increases with age in patients. It is more common in the elderly.

Positive Family History
Positive Family Portrait
Though not entirely clear, there is a familial component with open-angle glaucoma. Patients who have a positive family history should be regularly checked.

Primary Open-Angle Glaucoma

Most Common Form of Glaucoma
#1 Foam-finger Glock-eye
Primary open-angle glaucoma is the most common form of this disease.

Unknown Mechanism
Question-mark Mechanism
The cause for primary open-angle glaucoma is unclear, though it is understood that aqueous humor cannot flow through the trabecular meshwork.

Secondary Open-Angle Glaucoma

Blocked Trabecular Meshwork (With Open-Angle)
Blocking Trebeck in Mesh from fluid
In secondary open-angle glaucoma, the trabecular meshwork is obstructed by WBC's (from uveitis), RBC's (from vitrous hemorrhage) or retinal elements (from retinal detachment).

WBCs

White Mac-man

WBC's can build up and are too big to be filtered into the trabecular meshwork. They obstruct the passage of aqueous humor flow after a case of uveitis.

Red Blood Cells (RBC)

Red Blood Cell

RBC's can obstruct the flow of aqueous humor through the trabecular meshwork after vitreous hemorrhage.

Retinal Products

Red-tins Produced

Retinal products may build up and be unable to be filtered through the trabecular meshwork, obstructing flow of aqueous humor. Instances of such products being formed include retinal detachment.