What is pseudoexfoliation glaucoma?

Pseudoexfoliation (PXF) glaucoma is the most common type of open angle glaucoma with a known cause. It is associated with formation of dandruff-like flakes of protein called pseudoexfoliation material (PXFM) that are deposited throughout the eye. The PXFM is believed to block channels which drain fluid from the eye, resulting in high eye pressures. This leads to permanent and irreversible death of eye nerve cells and vision loss. As with other forms of glaucoma, the vision loss usually starts with side vision, and progresses to affect central vision later. Pseudoexfoliation glaucoma is often associated with very high eye pressures and glaucoma is often more advanced at the time of diagnosis compared to many other forms of glaucoma. Pseudoexfoliation is also associated with an increased risk of complications during and after cataract surgery.

GLAUCOMA
Loss of vision associated with death of eye nerve cells.

VISUAL FIELD
The surrounding (peripheral) and central vision.
Who is at risk for developing pseudoexfoliation glaucoma?

The presence of pseudoexfoliation material in the eye is the greatest risk factor for developing pseudoexfoliation glaucoma, although patients can have PXFM in the eye and not develop glaucoma. What causes the development of glaucoma in eyes with PXFM is not completely known, although other risk factors play a role in addition to the fluid outflow system of the eye.

Pseudoexfoliation glaucoma is more common among certain populations, such as Scandinavians, although PXF glaucoma is found throughout the world. Variations in two genes (LOXL1 and CACNA1A) have been identified as being associated with PXF glaucoma, but the sensitivity of genetic testing is not high enough to use this as a diagnostic tool, as many people have these gene changes but do not have PXF glaucoma. Exposure to sunlight and some nutritional factors have been suggested to be environmental risk factors for developing PXF glaucoma. Age is a significant risk factor, since PXF glaucoma usually develops in adults.

How is pseudoexfoliation glaucoma diagnosed?

Pseudoexfoliation is a diagnosis made by an eye doctor when a patient’s dilated eye is examined with the slit lamp microscope in the doctor’s office. If PXF material is identified along with other findings consistent with open angle glaucoma, such as visual field loss and/or loss of eye nerve cells, then pseudoexfoliation with glaucoma is diagnosed.

How is pseudoexfoliation glaucoma treated?

Similar to other types of glaucoma, pseudoexfoliation glaucoma is treated by lowering the eye pressure. This can initially be through the use of pressure-lowering eye drop medications. In some cases, laser treatment can also be helpful to lower eye pressure. If eye pressure cannot be lowered enough by eye medications and/or laser treatments to stop vision loss or optic nerve injury, then glaucoma surgery should be considered. Glaucoma surgery consists of creating a small channel through the wall of the eye or implanting tubes, stents or other implants to re-direct or enhance fluid flow out of the eye to lower the eye pressure. No cure exists for pseudoexfoliation glaucoma but it can usually be controlled by maintaining a low eye pressure.

SUMMARY

Pseudoexfoliation glaucoma is a relatively common form of glaucoma defined by the presence of pseudoexfoliation material in the eye. PXF glaucoma can be a more difficult type of glaucoma to control and glaucoma surgery is more often needed to control eye pressures and prevent glaucoma from worsening. No cure exists for pseudoexfoliation glaucoma, so regular follow-up examinations by an eye doctor are important to prevent permanent loss of vision.

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