



Our vision: Is for Australians to be free of glaucoma blindness

Acute Angle-Closure Glaucoma

Glaucoma of this type is the second most common and involves a narrow drainage angle.

In this case, the iris (coloured part of the eye) is usually too close to the drainage angle and can block the passage for the fluid to pass through. If angle closure occurs suddenly, the IOP may rise abruptly causing an ACUTE angle-closure glaucoma attack. Acute angle-closure is a medical emergency requiring urgent treatment.

Causes

This type of glaucoma is the result of an inherited narrowness of the drainage angle of the eye. The angle is located between the iris (the coloured part of the eye) and the trabecular meshwork through which aqueous fluid must drain to leave the eye. As the lens of the eye grows throughout life, the tendency to drain-narrowing becomes more marked with advancing years.

When the pupil dilates (with dim lighting conditions, with strong emotions, or with the use of certain types of medications), the contact between the iris and the lens resists the forward flow of aqueous, pressure builds up behind the iris forcing it onto the trabecular drain. This blocks the flow of the aqueous out of the eyes; the pressure rises rapidly. It may reach 60 or 70 mm Hg (the same units used to measure blood pressure) - instead of the usual level of 10 to 20.

Who is at risk?

It is more common in long-sighted eyes, older people, women and Asian populations.

Symptoms

This sudden rise in pressure produces dramatic symptoms: blurred vision, coloured rings around lights, severe pain in and around the eye, redness, nausea, and possibly vomiting. Although both eyes may be at risk of developing this acute attack (because the shape of the two eyes is usually similar and it is the shape that determines the risk), it is very rare for both eyes to be affected at the same time.

50% of patients with an acute angle closure attack give history of previous intermittent attacks, e.g. episodes of blurring of vision lasting 1- 2 hours, associated with haloes around lights, eye ache or frontal headache.

Detection

The symptoms of acute angle closure are severe and usually compel a person to seek medical help. An eye care provider will make the diagnosis of the disease.

Treatment

To preserve vision, the high pressure must be reduced quickly. Drops like pilocarpine, timolol, brimonidine as well as tablets and intravenous medications accomplish this. A peripheral iridotomy is performed with a laser. A laser iridoplasty may need to be performed if a peripheral iridotomy cannot be done. Usually a similar iridotomy is performed in the other eye too, to protect it from developing a similar attack.

Ongoing Management

Once the iridotomy has been performed, the eye pressure is often normal, and medications are not needed in the longer term. However, if the drain has been damaged by the acute attack, it may not be able to work efficiently again. If this is the case, drops may then be required. The eyes must be checked regularly and indefinitely.