



PRESENTATION

RECAP AT CME

Clinical Ophthalmology Updates

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All you need to know about Acute Angle Closure Glaucoma

Acute angle closure glaucoma (AACG), also called 'acute glaucoma' is a disease in which there are sudden increases in eye pressure. This usually occurs in one eye and is associated with sudden loss of vision. Acute glaucoma happens when aqueous humor (the liquid in the eye) is unable to drain correctly. It is more common in elderly population (female to male ratio 2:1) with long-sightedness. Symptoms include severe pain in the eye, redness, decreased vision, and sometimes nausea and vomiting. An acute attack is precipitated by partial dilatation of the pupil, which blocks the drainage of fluid out of the eye. The pressure inside the eye (intraocular pressure) rises quickly. Repeated attacks may also occur and may progressively reduce the visual field. Besides high intraocular pressure (IOP), other signs may include conjunctival injection, corneal epithelial edema, mid-dilated non-reactive pupil and shallow anterior chamber.

Acute angle closure glaucoma is an ocular emergency that require immediate treatment. The goals of treatment are to lower the pressure as soon as possible so as to reduce the risk of permanent optic nerve damage, and to prevent further attacks. Initially, AACG is treated with a range of medicines that may be given as eyedrops or pills. Intravenous medications may also be used in some cases where IOPs may be critically high. However, the definitive treatment for most cases of

angle closure glaucoma is laser peripheral iridotomy.

During an acute attack, the cornea is usually edematous secondary to the high IOP. Therefore, topical glaucoma eyedrops (such as beta blockers, alpha adrenergic agonists, and carbonic anhydrase inhibitors) may be used in combination first to lower the eye pressure. Once the eye pressure has been lowered, cholinergic eyedrops are used to stretch the iris and make it easier for the laser to produce a hole in the iris. Oral and intravenous medications may be necessary when topical medications fail to adequately lower the IOP.

A laser peripheral iridotomy produces a hole in the iris to break the pupillary block and acute closure of the drainage angle. Aqueous is allowed to make its way to the trabecular meshwork, thereby lowering the IOP. Instances where significant cataract is present during an acute angle closure attack, early cataract surgery may also be considered after reduction of IOP to prevent repeated attacks in the future.

In summary, acute angle closure glaucoma is a condition that requires immediate treatment. Rapid diagnosis, immediate intervention, and referral can have profound effects on patient outcome and morbidity.