Angle Closure Glaucoma

What is angle closure glaucoma?

Glaucoma is **optic nerve** damage which is associated with vision loss that typically begins to the side but later in the disease affects central vision. **Angle closure glaucoma** (ACG) is a common form accounting for about a third of all glaucoma cases.

Why does it occur?

The area between the front, clear dome of the eye (**cornea**) and the colored portion inside the eye (**iris**) is called the **anterior chamber angle** (Image 1). In all eyes, a fluid called **aqueous** is produced behind the iris that circulates to the front of the eye via the **pupil** (naturally occurring opening in the iris), and drains out through an opening located in the angle. In ACG, the iris near the angle blocks this opening, and pressure inside the eye builds up. This can occur suddenly (over minutes to hours) or gradually (over months to years).

Who is at increased risk of developing the disease?

- ACG is more common in older age (over 60 years).
- Women are 3 times more likely to be affected than men.
- Patients with a strong family history.
- Patients with farsightedness (shorter eyes).
- Asians.

Can it be prevented?

Yes. A laser procedure called **laser peripheral iridotomy (LPI)** makes a small hole in the iris and can prevent some high-risk patients from developing ACG (Images 3-5).

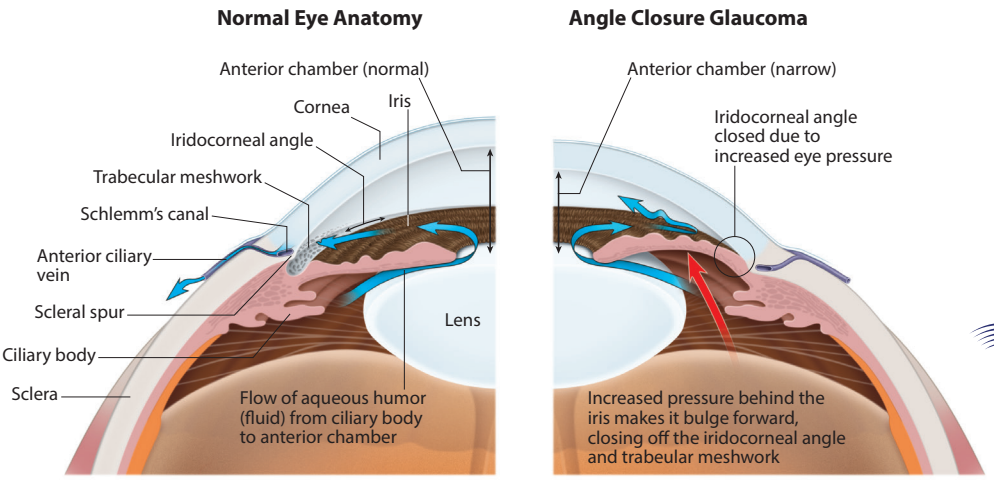

IMAGE 1

Angle Anatomy

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What are the signs and symptoms?

ACG, like most glaucoma diseases, has no symptoms when it occurs gradually. However, when an acute attack occurs, it is considered an ocular emergency. Patients may have the following symptoms:

- Severe pain in and around the eye
- Seeing halos or rainbow-colored rings around light sources
- Reduced vision
- Nausea and vomiting
- Eye redness (Image 2).

How is it diagnosed?

An eye doctor can diagnose ACG based on a clinical exam to check peripheral vision, eye pressure, and the appearance of the optic nerve and anterior chamber angle.

How is it treated?

Like treating most glaucoma diseases, the first step is to lower the eye pressure. In ACG, this can sometimes (but not always) be achieved with a LPI (Images 3 & 4). Afterwards, depending on the severity of glaucoma, the patient may need additional medications (eye drops, pills, or both), and some may require surgery to lower the eye pressure further.

How often should I come back for an eye check?

This is determined by the eye doctor based on the severity of the disease.

IMAGE 2

Acute ACG

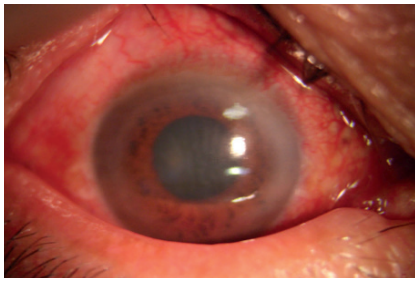


IMAGE 3

LPI being performed

IMAGE 4

LPI schematic

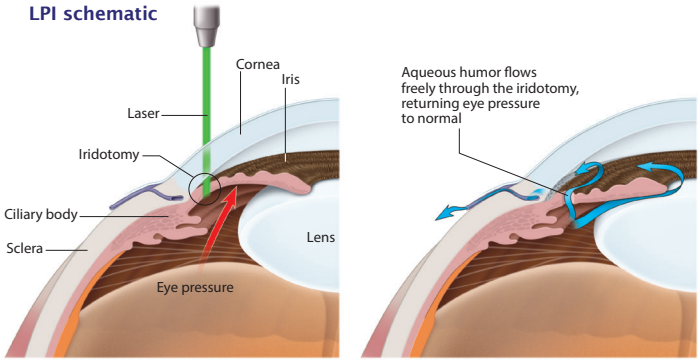
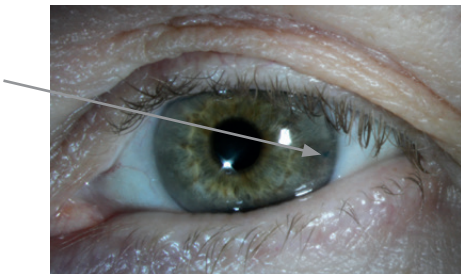
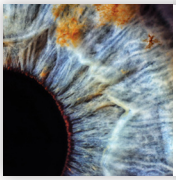


IMAGE 5

Eye post LPI





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