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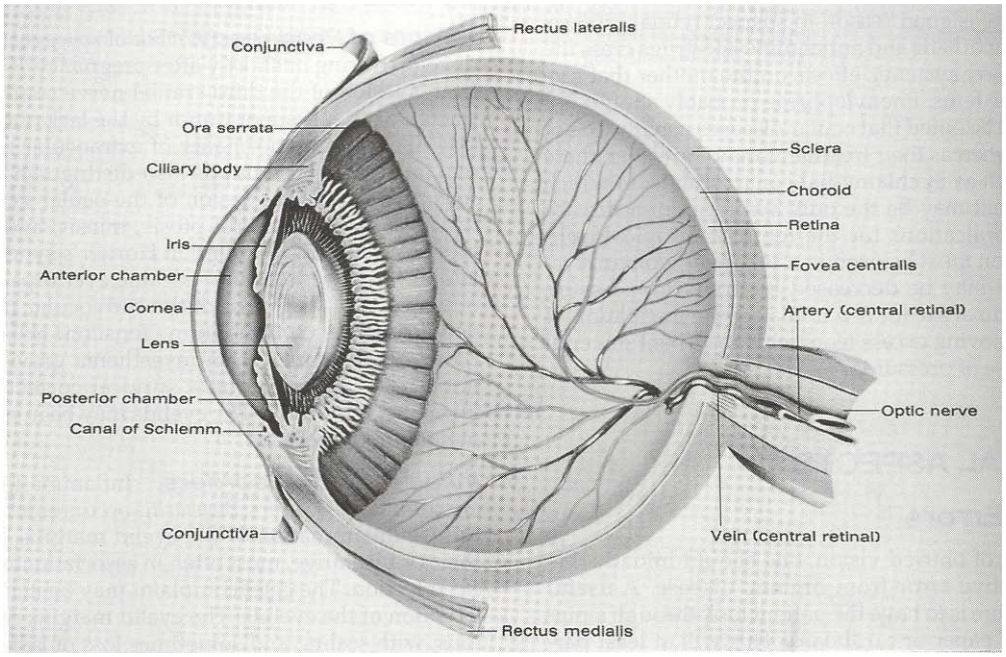
15 August 2003

Glaucoma and its Considerations during Pregnancy

Glaucoma is an elevation of intraocular pressure that damages optic nerve fibers which result in a progressive loss of visual field. Most cases of elevated IOP do not result in glaucoma.

Epidemiology
Age related, occurs in 2% of population over 40
More common in African Americans



Circulation of aqueous humor
Formed by ciliary processes in the posterior chamber behind the iris
Flows around lens, through the pupil, and into the anterior chamber
Leaves the eye through trabeculae within the sclera
Normal IOP 5-22 mmHg

Changes during pregnancy
Aqueous humor outflow increases during pregnancy.
IOP tends to decrease during the 2nd trimester
Subconjunctival hemorrhage may occur spontaneously during labor
Caution should be used when using PGE2 for cervical ripening in women with glaucoma

Open Angle Glaucoma (90%): relative decrease in the rate of aqueous humor outflow, leading to chronic asymptomatic elevation of IOP.

Closed angle Glaucoma (5%): anatomically shallow anterior chamber; when the pupil becomes dilated, the peripheral iris crowds the anterior chamber angle and closes off the humoral outflow.

Treatment

Open angle glaucoma is treated medically although the safety of these medications has not been well established.

Medical Therapy

1. Pilocarpine – headaches, blurred vision; near term, neonatal seizures and hyperthermia have been described.
2. topical β blockers
3. avoid oral carbonic anhydrase inhibitors (limb and renal anomalies; neonatal metabolic derangements)

Surgical Therapy

1. Argon Laser Tranbeculoplasty – decreased IOP in ~ 85% of eyes
2. Trabeculectomy (fistula is made between the anterior chamber and the subconjunctival space
3. Bilateral laser iridotomy for acute angle closure

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