

ED QUICK QUIZ

WHAT IS THE DIAGNOSIS?

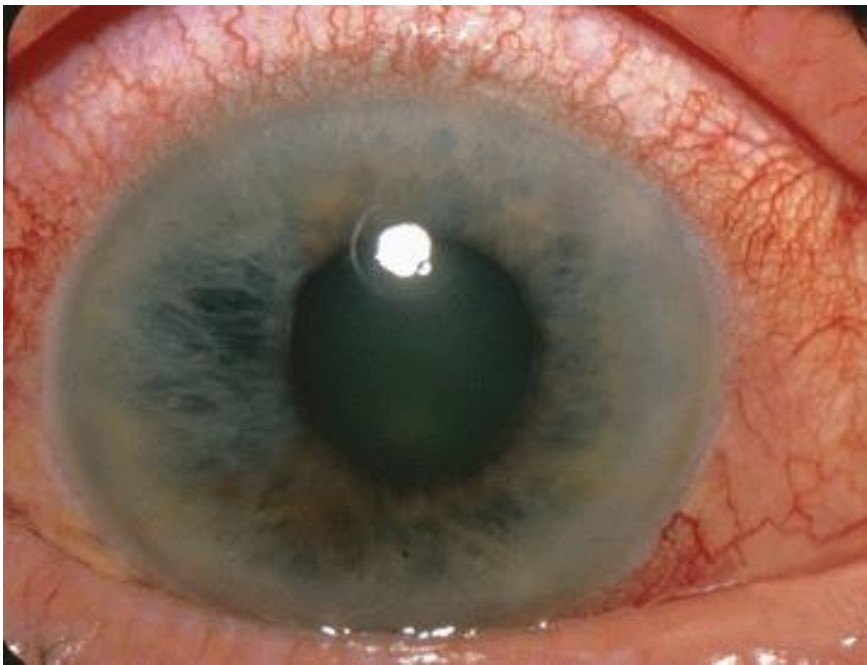
A 50 year old male attends ED due to sudden onset severe left eye pain.

He is vomiting profusely. He describes decreased visual acuity and seeing halos around lights

He has no significant PMHx and takes no regular medications

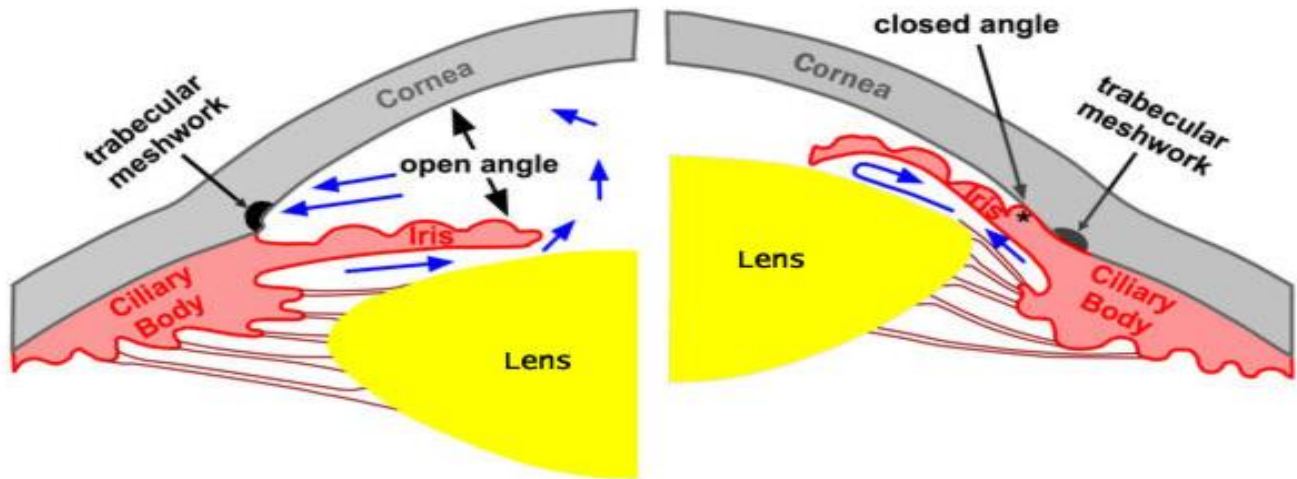
He has no ocular history apart from wearing reading glasses

On examination his eye looks like this, his pupil is unreactive to light



1. What is the diagnosis and what is the pathophysiology?
2. How is this condition managed?
3. Certain drugs are contraindicated in this condition what are they?

1. Acute angle closure glaucoma



Normally aqueous humor is produced by the ciliary body, circulates into the anterior chamber and drains via the trabecular meshwork.

In angle closure glaucoma the iris is pushed forward closing off the trabecular meshwork. Aqueous humor cannot escape and the intraocular pressure (IOP; normally 10- 21mmHg) rises (often >40mmHg).

Acute angle closure glaucoma is a sight threatening emergency as the sudden, sharp rise in IOP can damage the optic nerve.

It is more common in older patients and those who are long sighted (shorter anterior segment)

2. Management

Initial management should include laying the patient supine to increase the likelihood of the lens moving away from the iris.

Pilocarpine- causes miosis (constriction) via parasympathetic stimulation of ciliary muscles

Ophthalmology can use laser or surgical techniques to open the trabecular meshwork

3. Drugs causing acute angle closure glaucoma

Adrenergic drugs local e.g. phenylephrine drops, **salbutamol (nebulized)** or systemic e.g. epinephrine

Anticholinergics e.g. Tropicamide/ atropine drops, tricyclic antidepressants

Cholinergics e.g. Pilocarpine

Sulfa- based drugs e.g. acetazolamide, sulfamethoxazole (contained in Septrin), topiramate