Acute primary angle closure attack

Decision tree for the first hours in the emergency room or OPD

1 Recognise it

Painful red eye, haloes, blurred vision, headache, nausea or vomiting. **Mid-dilated unreactive pupil**, hazy cornea, shallow chamber, **IOP often above 40 mmHg**. Examine the fellow eye: narrow angle.

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2 Start treatment immediately

- **Acetazolamide 500 mg** IV or oral (check renal function, sulfa allergy, sickle cell).
- Topical **timolol 0.5%**, **brimonidine or apraclonidine**, and **prednisolone acetate 1%**.
- Lie the patient flat (supine); analgesia and antiemetic.

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3 After about an hour, as IOP falls

Pilocarpine 1 to 2% once or twice (ischaemic sphincter does not respond at very high IOP). Avoid pilocarpine in lens-induced (phacomorphic) angle closure.

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4 Recheck IOP every hour. Is the attack breaking?

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Yes: IOP falling, cornea clearing

Continue drops; plan **laser peripheral iridotomy in both eyes** as soon as the cornea is clear (usually within 24 to 48 hours).

No: IOP still high

- **IV mannitol 1 to 2 g/kg** over 45 minutes (check heart and kidneys), or oral glycerol if not diabetic.
- Corneal indentation with a gonioscopy lens; anterior chamber paracentesis.
- Laser iridoplasty, or urgent surgical iridectomy or lens extraction.

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5 Definitive treatment

- Laser iridotomy in the affected eye and **prophylactically in the fellow eye**.
- Consider **clear lens or cataract extraction**, especially over 50 with a thick lens (EAGLE trial).

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6 Follow-up

Gonioscopy after iridotomy (plateau iris needs iridoplasty or lens surgery), IOP, optic disc and visual fields: some eyes develop chronic glaucoma.