Intrepid ACUTE ANGLE CLOSURE GLAUCOMA

One-page clinician algorithm | Mechanism first, then LPI when pupillary block is present

ONE RULE: Closed angle = anatomy. Mechanism drives treatment.

1 CONFIRM + TRIAGE

- Pain/red eye, halos or blur, headache, nausea/vomiting
- High IOP + corneal edema + shallow anterior chamber
- Gonioscopy if view allows; do not delay treatment
- Ask: topiramate? sulfa meds? recent med change? myopic shift?
- Rule out: NVI, uveitis, ICE, tumor/mass, prior surgery, lens problem

Bilateral + acute myopic shift = effusion until proven otherwise

2 MECHANISM GATE

PUPILLARY BLOCK

- Iris bombe
- Shallow periphery
- Often unilateral
- Fellow narrow

LENS / PLATEAU

- Big lens/cataract
- Deep central AC = plateau clue
- Closure may persist after PI

DRUG / CILIOCHOROIDAL EFFUSION

- Stop causative medication; call prescriber
- Avoid pilo, LPI, oral CAI and topical CAI
- Non-CAI suppression + cycloplegic + steroid

3 START NOW

- Timolol 0.5%*
- Brimonidine or apraclonidine
- Acetazolamide 500 mg PO/IV*
- Topical steroid
- Analgesic + antiemetic
- Recheck IOP/cornea in 30-60 min
- Mannitol 1-2 g/kg IV if severe/refractory*

CONTRAINDICATION WATCHOUTS

CAI: sulfa-risk, renal/hepatic disease, sickle cell, electrolyte issues.
Beta-blocker: asthma/COPD, bradycardia, heart block, decompensated CHF.

4 PILOCARPINE?

- Use only for likely pupillary block
- Start after IOP begins to fall
- Defer if IOP > 40 mmHg
- Dose: 1 drop q15 min x 2-4 doses
- Then QID max until definitive LPI

AVOID PILO

Lens-induced closure, drug/effusion, aqueous misdirection, or secondary block from lens/IOL/gas/oil/vitreous. Excess pilo can move the lens-iris diaphragm forward.

5 MOVE TO LPI

- Pupillary block/mixed: LPI once view and cooperation are adequate
- Do not wait for IOP to normalize
- Cornea blocks view? Continue meds + escalate
- Not definitive for effusion or misdirection

AFTER LPI: PROVE IT WORKED

- Confirm patent PI; repeat IOP + gonioscopy
- Document PAS and optic nerve status
- Treat inflammation/IOP spike risk
- Fellow-eye LPI if phakic and narrow

6 STANDARD LPI SETTINGS

- Nd:YAG: start 2.5-4.0 mJ; titrate up
- 1-3 pulses/burst; shortest pulse
- Offset: 0
- No adjustable YAG spot size
- Aim peripheral crypt; avoid vessels/lid
- Endpoint: full-thickness PI with flow/plume
- Thick/dark iris: thermal pretreat, then YAG

Thermal pretreat example: 50 um, 200-500 mW, 0.05-0.1 sec

CLINICAL PEARLS

- Patent PI but angle still closed: think plateau, lens vault, PAS, or secondary closure.
- Cataract/intumescent lens: definitive treatment is often lens extraction.
- **Do not keep treating IOP without reopening the angle.**
- **Escalate if view is poor, mechanism unclear, or IOP remains severe.**

Sponsored clinical resource | Updated Oct 2026 | Use clinical judgment, medication labeling, and local protocols. Not a substitute for emergency referral/escalation when indicated. Sources: AAO PPP 2026; EGS Glaucoma Guidelines; AAO EyeWiki LPI and acute angle-closure emergency guidance.