CLINICAL PRACTICE GUIDELINE: Emergency Department

YAG Capsulotomy

Disclaimer: This Clinical Practice Guideline ('CPG') was written for use in The Royal Victorian Eye and Ear Hospital Emergency Department. It should be used under the guidance of an Ophthalmology or ENT registrar. If clinical advice is required, please contact the Eye and Ear Admitting Officer for assistance: EYE: +61 3 9929 8033; ENT: +61 3 9929 8032. Links to internal Eye and Ear documents cannot be accessed from the website CPG.

See also: Laser safety learning material

Description:

Visually significant opacification of posterior capsule (PC) in pseudophakic patient.

Pre-Procedure Management:

Informed consent:

- Risks: elevated intraocular pressure (IOP), damage to intraocular lens (IOL), dislocation/subluxation of IOL, floaters, retinal detachment, inflammation, cystoid macular oedema (more likely if less than 3 months post cataract surgery), need for additional laser, possible loss of vision.
- Explain indications for laser and what to expect (e.g. temporary floaters)
- Signed consent form: correct procedure, correct eye
- Measure and record: visual acuity, IOP, dilated fundus exam
- Pre-treat eye to be lasered with:
    - Tropicamide 0.5% eye drops, 1 drop, 30 minutes before procedure. If poor dilation, 1 drop, phenylephrine 2.5% eye drops, if blood pressure normal.
    - Consider: Brimonidine 0.2% eye drops, 1 drop, 30 minutes before procedure (decreases post-operative pressure spike).

Procedure:

- Follow laser safety protocol (i.e. laser in use signs, etc.)
- Correct protective eye wear for observer (1064 nm)
- Topical anaesthetic (oxybuprocaine 0.4% minim or proxymetacaine 0.5% eye drop)
- Consider contact lens specific for YAG capsulotomy, coupling gel
- Suggested laser settings

  NOTE: Laser settings may vary with machines and density of PC opacification

    - Defocus Beam, offset +1.50-+2.50 (decreases damage from laser to IOL). Alternatively, consider focus aiming beam slightly posterior to PC to avoid pitting the IOL.
    - YAG power settings: 1-2 millijoules, 1 burst per pulse.
- Start laser away from visual axis
- Depending on density of PC, may require up to 30-40 laser shots or more

Endpoint:

Opening in PC adequate for undilated pupil. May need larger opening for visualization of peripheral retina, i.e. diabetic retinopathy.

Post-procedure Care:

Topical steroid generally not required. Prednefrin forte® eye drops can be considered (QID for 7 days) if milky debris released with laser or risk of inflammation.

Follow up:

2-4 weeks

Discharge instructions:

Advise patients to return if pain, decreased vision, or symptoms of retinal detachment.

Additional notes:

Give patient copy of Laser Posterior Capsulotomy Patient Information

Evidence Table

Author(s)	Title	Source	Level of Evidence (I – VII)
	Wills Eye Manual 5th Edition, 2008		**VII**
	Moorfields Manual of Ophthalmology, 2008		**VII**

The Hierarchy of Evidence

The Hierarchy of evidence is based on summaries from the National Health and Medical Research Council (2009), the Oxford Centre for Evidence-based Medicine Levels of Evidence (2011) and Melynk and Fineout-Overholt (2011).

I) Evidence obtained from a systematic review of all relevant randomised control trials.

II) Evidence obtained from at least one well designed randomised control trial.

III) Evidence obtained from well-designed controlled trials without randomisation.

IV) Evidence obtained from well-designed cohort studies, case control studies, interrupted time series with a control group, historically controlled studies, interrupted time series without a control group or with case series.

V) Evidence obtained from systematic reviews of descriptive and qualitative studies.

VI) Evidence obtained from single descriptive and qualitative studies.

VII) Expert opinion from clinician, authorities and/or reports of expert committees or based on physiology.

Version Details:	
CPG No:	CPG40.0
Responsible Executive:	Executive Director, Medical Services
Review Officer:	Director, Emergency Department
Contributor(s):	• Clinical Practice Guideline Working Group • Director Emergency Department • Emergency Department Consultant
National Standard:	Comprehensive Care
Version Number:	430
Approval Date:	09/06/2021
Next Review Due:	09/06/2026