STANDARD TREATMENT WORKFLOW (STW)

Glaucoma

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Standard Treatment Workflow (STW)

**GLAUCOMA**

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<th>ICD-10-H40.9</th>
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**KEY POINTS**

- **Glaucoma can be asymptomatic.**
- **Can lead to irreversible vision loss if not treated in time.**
- **Everybody > 40 years age to be screened.**
- **Everybody with a family history of glaucoma to be screened.**

**SCREENING CRITERIA**

- Abnormalities of optic nerve head (Cup to disc ratio > 0.7, asymmetry > 0.2)
- IOP > 20mmHg
- Evidence of optic nerve atrophy or visual field defects
- Visual field defects
- Evidence of previous surgery or laser treatment
- Evidence of imminent angle closure glaucoma
- Normal tension but associated with other features of normal-tension glaucoma

**HISTORY TAKING**

- Unilateral intermittent headache, blurring of vision, eye pain, coloured halos
- Previously diagnosed glaucoma
- Treatment history - medical/surgical/laser compliance with medication/follow up

**SIGN**

- Higher baseline IOP before surgery
- Systemic: Hypertension, Cardiovascular diseases
- Traumatic ischaemic events (TIG)
- Systemic and ocular medications used
- Any OTC medication especially steroids for allergy
- Any ocular surgery

**DIAGNOSIS**

- Slit lamp, biomicroscopy, AC Depth, gonioscopy
- Pupil reflex, Estimation of IOP (3 measurements), Visual field assessment

**EXAMINATION IN OD/P**

- Cupping > 0.7
- Asymmetry > 0.2, Notch
- Shallow AC
- IOP > 14.8 mmHg
- IOP = 20 mmHg

**TOMOMETRY (repeat twice) + Gonioscopy**

- Open angles (PAC) Suspect
- Narrow angles (PAC-TAP)
- Narrow angles (PAC-OC)
- Open Angles (PAC-TAP)

**PERIMETRY = baseline IOP (preferably morning and evening) to determine target IOP.**

**TARGET IOP**

< 25 mmHg

- First line drug - Prostaglandin F2α (0.004%) or 0.04%
- First line drug - Brimonidine or Timolol

> 30 mmHg

- Timolol or Brimonidine
- Topical carbonic anhydrase inhibitors

- Review after 4 months if target IOP achieved
- Review after every 3 months if target IOP achieved
- Review after every 3 months if target IOP achieved
- Review after every 3 months if target IOP achieved

**MANAGEMENT**

- **PAC**
  - Evaluate for open angle (deep AC), narrow angle (shallow AC) with slit lamp
  - Detailed history and examinations
  - Referral to Ophthalmologist, as soon as possible if IOP > 21, shallow anterior chamber or cup/disk ratio > 0.7
  - Counseling regarding spacing and phasing of glaucoma medication and reporting of side effects if any
  - Counsel that surgery is not a cure but a means to lower IOP to stabilize disease. The follow up is mandatory and will remain, regardless
  - Counsel that stabilization of disease is available with regular treatment and follow up

- **RED FLAG SIGN**
  - IOP > 30
  - Loss of pupillary reflex with visual impairment
  - Single eye patient with glaucoma
  - Initial initial therapy for acute attack
  - Uncontrolled glaucoma (i.e., diagnosis of glaucoma, with confirmed narrow angle before year I)

**DISTRICT HOSPITAL**

- Refraction by RBA
- Detailed work up including Slit lamp examination, AC Depth, IOP, Optic nerve head exam
- Gonioscopy, fields and diagnosis, classify, advice as per flow chart point to point
- Surgical intervention such as YAG PI and Trabeculectomy
- Counseling regarding spacing and phasing of glaucoma medication and reporting of side effects if any
- Counsel that surgery is not a cure but a means to lower IOP to stabilize disease. The follow up is mandatory and will remain, regardless
- Counsel that stabilization of disease is available with regular treatment and follow up

**TERMIANAL CARE**

- Detailed work up as above
- Optional investigations such UBM, OCT, HRT, GCC for RNFL thickness when necessary
- Surgical intervention, YAG PI, Trabeculectomy, any other advanced procedure such as tube shunts
- Ensure rehabilitative follow up and compliance including collaboration with district hospital ophthalmologists
- Counseling regarding spacing and phasing of glaucoma medication and reporting of side effects if any
- Counsel that surgery is not a cure but a means to lower IOP to stabilize disease. The follow up is mandatory and will remain, regardless
- Counsel that stabilization of disease is available with regular treatment and follow up

**QUALITY ASSESSMENT**

- Patient list
- Age
- Gender
- Compliance with follow up schedule and medications

**INDICATIONS FOR SURGERY**

- IOP above target, despite maximal tolerated medical therapy
- Inability to review regularly
- Unacceptable medications
- Progression of the disease on maximal tolerated medical therapy
- Non compliance

**ABBREVIATIONS**

- AC: Anterior chamber
- OCT: Optical coherence tomography
- GCC: ganglion cell complex
- PAC: Perimetry automated corneal tomography
- HRT: Hartmann-Thomas biomicroscopy
- RNFL: Retinal nerve fiber layer
- IOP: Intraocular Pressure
- POMD: Primary open angle glaucoma
- RNFL: Retinal nerve fiber layer
- UBM: Ultrasound biomicroscopy

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