Mid and South Essex Health and Care Partnership

NHS

PRIMARY OPEN ANGLE GLAUCOMA AND OCULAR HYPERTENSION TREATMENT PATHWAY: ADULTS

Note 1: Diagnosis of OHT or suspected COAG and treatment initiation (for all drugs) must be done by an ophthalmologist. Treatment is started in patients with an intraocular pressure (IOP) of 24 mmHg or more if they are at risk of visual impairment within their lifetime

Does the patient have ocular hypertension (OHT) or suspected chronic open angle glaucoma (COAG) with high intraocular pressure IOP? See notes 1, 2 & 5

Note 2: At initiation determine target IOP by considering:
- Stage of glaucoma
- Age and life expectancy
- Duration of untreated IOP
- Additional risk factors e.g. Psedoexfoliation
- Rate of progression during follow up
- Central corneal thickness (CCT)

Yes

Generic prostaglandin analogue (PGA)*- YELLOW TLS
Latanoprost 50micrograms/ml (1 drop in the evening) - preferred choice
Bimatoprost 100micrograms/ml (1 drop in the evening)
Preservative free (PF) see note 3:
Latanoprost 50micrograms/ml PF (1 drop in the evening) - preferred choice
or Bimatoprost 300micrograms/ml PF (1 drop in the evening)

Note 3: preservative free eye drops: Only if allergic to preservatives (e.g. benzalkonium chloride) or with clinically significant and symptomatic ocular surface disease e.g. epithelial toxicity

***PGA:**
Bimatoprost 100micrograms/ml: preferred choice in advanced glaucoma.

Review for efficacy, adherence and if tolerated?^

Target IOP not achieved or PGA is contra-indicated

^At each review:
- IOP
- Compliance to treatment
- Tolerance
- Other relevant assessments (if required) e.g. pulse, CCT

Continue treatment if adequate response is maintained/achieved.

***Beta Blockers (BB)**
Use 1st line in unilateral glaucoma patients; aphakia

Second Line: Add/change- Generic beta blocker (if not contraindicated)*- YELLOW TLS
Timolol 0.25%, 0.5% (1 drop twice daily) - preferred choice
If intolerant to above: Betaxolol 0.25% (1 drop twice daily)
Preservative free (see note 3):
Timolol 1mg/g gel unit dose PF (1 drop twice daily)
Betaxolol 0.25% unit dose PF (1 drop twice daily)

Refer to appendix 1 for general prescribing information

IOP target not achieved or BB is contra-indicated

Review for efficacy, adherence and if tolerated?^

IOP target achieved when using 2 separate products

Third line, either use:
Carbonic anhydrase inhibitor (CAI) or Alpha adrenergic agonist (AAA) – YELLOW TLS
CAI: Dorzolamide 20 mg/mL (1 drop two to three times a day) – **preferred choice.**
If intolerant consider: Brinzolamide 10mg/ml (1 drop two to three times a day)
CAI Preservative free (see note 3):
Dorzolamide 20mg/ml PF (1 drop two to three times a day)

AAA[a]: Brimonidine 0.2% (1 drop two to three times a day)

Review for efficacy, adherence and if tolerated?^

IOP target not achieved

Combination treatment (see note 4):
PGA + BB – YELLOW TLS
Latanoprost 50micrograms/ml / Timolol 5mg/ml (1 drop once daily) - preferred choice
Bimatoprost 300micrograms/ml / Timolol 5mg/ml (1 drop once daily)

Preservative free (see note 3):
Latanoprost 50micrograms/ml / Timolol 5mg/ml PF (1 drop once daily)
Bimatoprost 300micrograms/ml / Timolol 5mg/ml PF (1 drop once daily)

Note 4: When two or more therapies are needed to control the eye pressure, use combination treatment to reduce preservative load and improve compliance

[a]AAA
Used as monotherapy if there is no response to 1st or 2nd line treatments, or if other drops are contra-indicated

IOP target not achieved

Review for efficacy, adherence and if tolerated?^

IOP target achieved when using 2 separate products

Combination therapy options (see Note 4) :
CAI + BB- YELLOW TLS
Dorzolamide 20mg/ml / Timolol 5mg/ml (1 drop twice daily) - preferred choice
Brinzolamide 10mg/ml / Timolol 5mg/ml (1 drop twice daily)
Preservative free (see note 3):
Dorzolamide 20mg/ml / Timolol 5mg/ml PF unit dose vials (UDV) - 1 drop twice daily

CAI + AAA- YELLOW TLS
Brinzolamide 10mg/ml / Brimonidine 2mg/ml - 1 drop twice daily

AAA + BB- YELLOW TLS
Brimonidine 2mg/ml / Timolol 5mg/ml - 1 drop twice daily

Fourth line, either add:
Carbonic anhydrase inhibitor (CAI) or Alpha adrenergic agonist (AAA)- YELLOW TLS
Refer to Third line box above for treatment options

IOP target not achieved

Review for efficacy, adherence and if tolerated?^

IOP target not achieved

Fifth line, for refractory cases see note 6

Note 5: Selective laser trabeculoplasty (SLT):
- Increasingly used as first line treatment
- Eye drops are contraindicated/not tolerated
- Administration of eye drops is an issue
- Compliance to eye drops is poor
- Preservative free eye drops are required

Note 6: Refractory treatment options- RED TLS

Apraclonidine 10mg/ml (1%) PF UDV (1 drop 1 hour before and after SLT procedure or 1 drop TDS for 1 month)
- patients not adequately treated by other drugs
- waiting for laser treatment or surgery
- refractory glaucoma for short term use

Pilocarpine 1% or 2% (1 drop up to four times a day)
- Use in refractory cases only
- Patients in whom pupil miosis is beneficial

Acetazolamide oral tablets (0.25–1g daily in divided doses)
- Use short term in emergency acute cases only

Appendix 1: General prescribing information

- The Summary of Product Characteristics (SPC) for the drugs should also be consulted for up to date prescribing information, including detailed information on adverse effects, drug interactions, cautions and contraindications (available via www.medicines.org.uk)
- Patients may be seen by glaucoma trained optometrists or nurse practitioners for their ongoing management. The initial supply of any new treatments are provided by secondary/tertiary care who will issue the least expensive appropriate option.
- First line treatment is initiated as indicated in the treatment pathway starting with prostaglandin analogues (PGAs), unless contraindicated.
- Beta blockers are first line treatment for unilateral treatment, aphakia and if there has been no IOP reduction with PGAs.
- Patients prescribed topical medication are encouraged to continue with the same treatment unless: IOP is not sufficiently reduced, the glaucoma has progressed, or they are intolerant to the drug
- The most cost effective second line treatment (PGA and Beta Blocker) is chosen if there has been an adequate IOP reduction but not sufficient to meet the patient's target
- For non-responders to second line treatment, additional third or fourth line treatments can be introduced. They can be used as monotherapy if there has been no response to drugs in step one and two
- Preservative free formulations must be used appropriately. There are reports of damage to the tear film and corneoconjunctival surface and various forms of conjunctivitis in glaucoma patients using eye drops preserved with benzalkonium chloride. Patients with COAG who are allergic to benzalkonium chloride should be offered a preservative-free preparation if there is evidence that the patient is allergic or intolerant of the preservative
- Do not switch patients that are currently stable on agent/s not detailed in the pathway (this excludes a switch from a brand to a formulary generic).
- If a patient requires preservative-free eye drops specifically the clinical reasoning will be clearly stated in the communications to primary care

References	NICE guideline [NG81] Glaucoma: diagnosis and management https://www.nice.org.uk/guidance/ng81 NICE guideline https://bnf.nice.org.uk/
Acknowledgements	MSEFT Ophthalmology Team and Medicines Managements Teams, Mid and South Essex CCGs
Version	1
Author	HCPMSEMOC working group
Approved by	MSEMOC
Date Approved	October 2021
Review Date	October 2026 or earlier subject to any new updates nationally