

x Anti-glaucoma drugs.

- ① β adrenergic blockers. ② α adrenergic agonists ③ Prostaglandin analogues ④ CA inhibitor.

timolol
betaxolol
levobunolol

Deprivferine
mimivudine

latanoprost
travoprost
bimatoprost

Proxolamide
bimatoprost
de.

⑤ Mitotics

Phenylephrine
Physostigmine.

⑥ Phosphatase inhibitors

Acetazolamide

① β adrenergic blockers.

A) timolol

- β blocker ($\beta_1 + \beta_2$).
- Ocular hypotensive action (reduce IOP)
- Effect on IOP persists for 1-2 weeks following discontinuation.
- High level of clinical safety.

B) Betaxolol

- Selective blocker.
- Less bronchopulmonary, cardiac, central & metabolic.
- Exert a protective effect on retinal neurons by blocking some Ca^{2+} channels and reducing Na^+/Ca^{2+} influx.
- Prefer to start with betaxolol and change to

timolol.

c) Levobunolol.

systemic effects similar to timolol, longer duration of action.

② ~~Adrenergic agonists~~ Adrenergic agonists.

a) Dipivefrine: α_1 + α_2 mediated.

- penetrates cornea, so it is hydrolysed by esterases present there into ACh.
- produces ocular burning & has become unavailable.

b) Brimonidine

- more α_2 selective and more hydrophobic than apraclonidine.
- lowers IOP by 20-27% by reducing aqueous production and by $\uparrow$ ing uveoscleral flow.

Side effects: Allergic conjunctivitis and other ocular side effect.

- Due to weak α_1 actions, mydriasis, eyelid retraction, conjunctival blanching followed by hyperemia may occur.

Dry mouth, sedation & a small fall in BP have been noted.

③ Prostaglandin Analogues.

A) Latanoprost.

- $PGF_{2\alpha}$ derivative.
- Reduces IOP.
- because of good efficacy, once daily application of & absence of systemic complications have become first choice of drugs.

B) Travoprost.

FP prostanoicd receptor agonist which lowers IOP by increasing uveoscleral outflow and minor effect on trabecular outflow.

C) Bimatoprost

- Synthetic prostanoicd derivative.

④ CA inhibitors.

A) Dorzolamide.

developed to circumvent systemic side effects of Acetazolamide, lowers IOP by 20%.

⑤ ~~Bj~~ Mitotics

til 1970, topical pilocarpine or anti chE were standard antihypertonia drugs.
several drawbacks.

⑥ Rho kinase inhibitors.

A) Netarsudil

novel aminoisquinoline amide which inhibits
ocular ROK and lower IOP by reducing
trabecular outflow resistance.

It also inhibits NA transporter (NET)

• It acts by directly relaxing TM, lowering
episcleral venous pressure, reducing aqueous
formation.