

GLAUCOMA

The IOP-lowering effect of eye drops seems to wear off in some people, so annual review is necessary; and switching between classes of medications may be necessary.

Glaucoma treatment options include:

- Prostaglandin analogues (bimatoprost, latanoprost, tafluprost, travoprost)
- Beta-blockers (betaxolol, timolol)
- Alpha2 agonists (apraclonidine, brimonidine)
- Carbonic anhydrase inhibitors (brinzolamide, acetazolamide)
- Cholinergic (pilocarpine)

Prostaglandin analogues are the most effective class of eye drops. They should be administered once daily at night for best effect.

Beta-blocker eye drops are also used as first-line therapy. Beta-blocker eye drops are usually administered twice daily, with Timoptol-XE administered once daily.

Timolol eye gel (Nyogel) should be stored upside down so that the gel collects in the bottle neck.

Alpha2 agonist apraclonidine (Iopidine) should only be used short-term (up to 3 months) as it is associated with a high incidence of allergic blepharoconjunctivitis (inflammation of eyelid margin and conjunctivitis). Brimonidine (Alphagan) is well tolerated when used long-term.

Alpha2 agonist eye drops need to be administered three to four times daily.

Numerous fixed-dose combination products are available, combining different classes of glaucoma eye drops. Fixed-combination eye drops should be prescribed to minimize the number of eye drops used.

Oral acetazolamide tablets (Diamox) are used to reduce intraocular pressure prior to surgery.

Angle-closure glaucoma is initially treated with laser or surgical interventions. Topical treatment may be used in those with persistent raised IOP despite laser or surgical procedures.

highest efficacy and lowest incidence of adverse reactions.

Classification

Glaucoma can be classified as open-angle or angle-closure.

Open-angle glaucoma is the most common form of glaucoma which develops slowly over time and there is no pain.

Closed-angle glaucoma can present gradually or suddenly, with severe eye pain, blurred vision, eye redness and nausea. Acute angle glaucoma is a medical emergency.

Risk factors

Risk factors for glaucoma include elevated pressure in the eye (intraocular pressure). A family history of glaucoma doubles the risk of glaucoma.

First-degree relatives have a 9-fold increased risk of developing glaucoma. Higher glaucoma prevalence has been found in Asian populations.

Obstructive sleep apnoea is associated with a nearly 2-fold risk of glaucoma. Myopia (near-sightedness) and diabetes are other significant risk factors for glaucoma.

Treatment

If treated early, it is possible to slow or stop the progression of disease. Topical drugs are first-line treatment for open-angle glaucoma, either alone or in combination.

