

Since pilocarpine indirectly lowers IOP, the medication is indicated for patients with glaucoma. Pilocarpine is a second-line drug for patients with primary open-angle glaucoma (POAG). The drug decreases IOP as the ciliary muscle contracts and widens to facilitate aqueous humor outflow. In patients with primary angle-closure glaucoma (PACG), the contraction of the iris sphincter pulls the iris from impeding aqueous humor outflow.

Pilocarpine may be used to treat acute cases of primary angle-closure glaucoma to relieve increased IOP.

Side Effects

Detached Retina

Detached Red-tins

The action of pilocarpine causes the lens and vitreous to move forward and may create a retinal tear. Sustained contraction of the ciliary muscle may lead to retinal detachment.

Decreased Visual Acuity

Down-arrow Eye Accuracy

By constricting the pupils, pilocarpine may cause blurred vision and decreased visual acuity. Contraction of the ciliary muscle focuses the lens for near vision. Corrective lenses may be prescribed to help improve decreased visual acuity.

Eye Irritation

Eye Irritated

Pilocarpine is administered topically to the lower conjunctiva as either a solution or an ophthalmic gel. The medication may cause eye irritation, such as eye pain and brow ache.

Cholinergic Effects

Cola Fx

Although rare, pilocarpine may be absorbed by the body and cause systemic effects. Widespread stimulation of cholinergic receptors may lead to bradycardia, bronchospasm, hypotension, and hypersalivation. Additional cholinergic effects include urinary urgency, diarrhea, and sweating. A muscarinic antagonist, such as atropine, may be administered to reverse systemic toxicity (refer to the Picmonic on "Atropine").

Considerations

Avoid with Asthma or Bradycardia

Avoid-sign Asthma-inhaler and Snail-heart

Since pilocarpine may cause systemic cholinergic effects, the medication may induce bronchospasms or bradycardia. Avoid administering pilocarpine in patients with asthma or bradycardia to avoid worsening symptoms.