



Title	Prostaglandin Analogues for Ophthalmic Use: Analysis of Clinical and Cost Effectiveness
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Aim

To perform a systematic review and economic evaluation of prostaglandin analogues (PGAs) in treating increased intraocular pressure (IOP), using evidence from published and unpublished randomized controlled trials (RCTs).

Conclusions and results

Not all PGAs are the same. Evidence shows that latanoprost and travoprost reduce IOP more effectively than timolol. The same evidence does not exist for bimatoprost. Timolol that is used as a first-line option could represent an optimal use of scarce resources. For appropriate patients, it would be preferable, from a cost-effectiveness standpoint, to start treatment with timolol and reserve the PGAs as an alternative treatment or as add-on therapy for patients not achieving a clinical response with timolol. Compared to dorzolamide, latanoprost is more effective and less costly. Compared to brimonidine, latanoprost is associated with additional costs, at a lower cost per mm Hg reduced. There is no evidence that greater reductions in IOP translate into reductions in visits to a physician or surgical procedures, or an increase in health-related quality of life.

Recommendations

None given.

Methods

A systematic review the clinical literature included 22 RCTs comparing PGAs to alternative therapy in individuals >18 years old with elevated IOP who were treatment-naïve or who experienced appropriate washout before treatment. The cost-effectiveness analysis used the perspective of Canadian ministries of health. A decision-analytic model using a 3-month time horizon calculated the associated costs and consequences of using latanoprost versus timolol, dorzolamide, and brimonidine; and travoprost versus timolol.

Further research/reviews required

Long-term studies are needed.