

Practical approach to medical management of glaucoma

Dear Editor,

We read with interest the article "Practical approach to medical management of glaucoma" by Parikh *et al.*^[1]

The authors have stated that the effect of prostaglandin analogue (PGA) is "inversely proportional" to the degree of closed angle. They also stated that the effect of PGA in a totally closed angle is minimal. However, they did not support either of these statements with any evidence from the published literature.

In our experience, PGA therapy is useful in medical management of many cases of chronic angle closure glaucoma (CACG) after laser peripheral iridotomy (LPI). On an extensive search of the published literature, we found abundant evidence supporting the efficacy of PGA in controlling intraocular pressure (IOP) after LPI in patients with CACG even with significant degree of peripheral anterior synechiae (PAS).

In a prospective observational case series^[2] of 137 Asian subjects with CACG, the IOP-reducing efficacy of latanoprost was not affected by the degree of PAS. In a crossover comparison of latanoprost and timolol in CACG in Indian patients,^[3] those with PAS involving more than 180° achieved greater IOP reductions with latanoprost. A recent case series found significant reduction in IOP with latanoprost in CACG patients with 360° of PAS on gonioscopy.^[4] As further evidence, a report of the Third Consensus Meeting of the Association of International Glaucoma Societies on the management of angle closure glaucoma concluded that PGAs are the most effective medical agents in lowering IOP following LPI, regardless of the extent of synechial closure.^[5]

We do appreciate that the mechanism of action of PGA in

eyes with closed angles is not well understood. However, in light of positive results with the use of PGA in CACG, it has been hypothesized that PGA may increase the uveoscleral outflow by gaining access to the ciliary body either through the partially open part of the anterior chamber angle or through other routes such as the posterior chamber between the iris and lens, the iris root itself, or the sclera.^[2]

Parikh *et al.*^[1] have also stated that the effect of PGA on IOP reduction is minimal if the patient is treated with pilocarpine. The current evidence in literature is against this statement. It is accepted that the contraction of the ciliary muscle induced by high-dose pilocarpine may theoretically hinder uveoscleral outflow, and in some animal studies, a high-dose (10%) pilocarpine has been shown to reduce the ocular hypotensive effect of PGA. However, several clinical studies clearly indicate that a therapeutic dose of pilocarpine does not inhibit the ocular hypotensive effect of PGA in the human eye. In a detailed review of available literature,^[6] it was concluded that the addition of latanoprost to the treatment regime of patients already taking cholinergic agonists is effective. Shin *et al.*^[7] have shown that pilocarpine therapy, in any dose, has no significant adverse effect on latanoprost additive therapy.

Based on our clinical experience and the available evidence in literature, we believe that PGAs are an important part of the armamentarium in modern medical therapy of most cases of CACG.

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References

1. Parikh RS, Parikh SR, Navin S, Arun E, Thomas R. Practical approach to medical management of glaucoma. *Indian J Ophthalmol* 2008;56:218-25.
2. Aung T, Chan YH, Chew PT; EXACT Study Group. Degree of angle closure and the intraocular pressure-lowering effect of latanoprost in subjects with chronic angle-closure glaucoma. *Ophthalmology* 2005;112:267-71.
3. Sihota R, Saxena R, Agarwal HC, Gulati V. Crossover comparison of timolol and latanoprost in chronic primary angle-closure glaucoma. *Arch Ophthalmol* 2004;122:185-9.
4. Kook MS, Cho HS, Yang SJ, Kim S, Chung J. Efficacy of latanoprost in patients with chronic angle-closure glaucoma and no visible ciliary-body face: A preliminary study. *J Ocul Pharmacol Ther* 2005;21:75-84.
5. Ritch R, Nolan W, Lam D. Laser and medical treatment of primary angle closure glaucoma. In: Weinreb N, Friedman DS, editors. *Angle closure and angle closure glaucoma*. 1st ed. The Hague: Kugler Publications; 2006. p. 37-54.
6. Toris CB, Alm A, Camras CB. Latanoprost and cholinergic agonists in combination. *Surv Ophthalmol* 2002;47:S141-7.
7. Shin DH, McCracken MS, Bendel RE, Pearlman R, Juzych MS, Hughes BA, *et al.* The additive effect of latanoprost to maximum-tolerated medications with low-dose, high-dose, or no pilocarpine therapy. *Ophthalmology* 1999;106:386-90.