

Effect of Fixed Combination Brimonidine 0.2 Percentage and Timolol 0.5 Percentage in the Treatment of Patients with Glaucoma

M. Kwon, H. Oh, J. Kim, S. Cho

Ophthalmology, Kangbuk Samsung Hospital, Seoul, South Korea

Purpose: To study effect of fixed-combination brimonidine 0.2%-timolol 0.5% in the treatment of patients with glaucoma.

Methods: This was observational, open-label study involving patients with primary open-angle glaucoma(POAG) and normal tension glaucoma(NTG). Patients were treated with a twice-daily dosing schedule for fixed brimonidine/timolol. The main effect measures were composed of three small studies. First study was diurnal intraocular pressure (IOP) comparison between baseline and at 6 months after using fixed brimonidine/timolol.(n=22) Second study was measurement of pupil size and anterior chamber depth(ACD) over time.(n=57) Finally, we studied effect of 1 drop of fixed brimonidine/timolol to diurnal IOP.(n=10)

Results: First, the mean diurnal IOP for POAG decreased from 21.83 ± 1.97 mmHg to 15.88 ± 2.42 mmHg at 6 months after using fixed brimonidine/timolol, and the mean diurnal IOP for NTG decreased from 12.72 ± 2.86 mmHg to 10.54 ± 1.91 mmHg. There was statistical difference in patients with POAG ($P<0.001$) and NTG ($P<0.001$). In second study, there was marked change in pupil size over time, but not in ACD. Finally, we confirmed that 1 drop of fixed brimonidine/timolol caused the mean diurnal IOP reduction by 1.4 mmHg ($P=0.099$).

Conclusions: This study suggests that fixed combination of brimonidine and timolol has good IOP lowering effect and significant effect on pupil size.