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Comparative Evaluation of the Efficacy of the Bimatoprost 0.03% , Brimonidine 0.2% , Brinzolamide 1% , Dorzolamide 2% , and Travoprost 0.004% /Timolol 0.5% -Fixed Combinations in Patients Affected by Open-Angle Glaucoma

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ABSTRACT

Purpose: This is a retrospective, comparative, head-to-head, not commissioned study about the efficacy of bimatoprost 0.03%, brimonidine 0.2%, brinzolamide 1%, dorzolamide 2%, and travoprost 0.004%/timolol 0.5%-fixed combinations in patients affected by naive open-angle glaucoma and IOP > 25 mmHg. **Patients and Methods:** Files from 70 patients (35 M, 35 F, mean age 69.52 y, S.D. 11.56, range: 37-87y) in our Glaucoma Service were retrospectively analyzed as long as 12 months. Every subgroup, including 14 age- and sex-matched patients, was allocated to 1 of the 5 groups of the fixed combinations monotherapy. Data recorded after 3 months follow-up were statistically analyzed by descriptive and ANOVA statistics as percentage of IOP reduction from baseline. **Results:** All the fixed combinations were effective in lowering IOP. The mean percentage reduction was: brimonidine/timolol 43.57%, dorzolamide/timolol 37.67%, bimatoprost/timolol 35.60%, travoprost/timolol 33.25% and brinzolamide/timolol 23.0%. The brimonidine/timolol fixed combination showed to be statistically significant more effective only than brinzolamide/timolol fixed combination ($p = 0.001$). Setting the α error to 5%, the power of the study is 26%, phi: 0.842. **Discussion:** In all this cohort of patients the target IOP was successfully achieved. All the fixed combinations used in this study had a very good profile of efficacy. Brimonidine, dorzolamide, bimatoprost and travoprost/timolol fixed combinations statistically significantly reduced the percentage of IOP from baseline ($p = 0.001$) more than brinzolamide/timolol fixed combination.

KEYWORDS

Bimatoprost 0.03%; Brimonidine 0.2%; Brinzolamide 1%; Dorzolamide 2%, Travoprost 0.004%/Timolol 0.5% Fixed Combinations; Efficacy; IOP

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