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Effects of ocular hypotensive on ocular surface and cornea

Manik Gupta, Sushma David and Md Iqram Khan International Council of Ophthalmology, India

Objective: To study the effects of ocular hypotensive on ocular surface and cornea.

Method: The proposed study is a prospective randomized interventional study to be conducted in patients having open angle glaucoma (primary and secondary) and ocular hypertension. A total of 60 eyes will be divided into four groups (15 each) according to type of topical hypotensive therapy. Four groups formed are as follows- Group-1: Beta blocker-Timolol/Betaxolol; group-2: Brimonidine; group-3: Dorzolamide/Timolol+Dorzolamide combination and group-4: PG analogues- Latanoprost, Travoprost, Bimatoprost. After proper clinical diagnosis all the patients have to undergo clinical tests (IOP, Schirmers test, TUBT, endothelial cell count, pachymetry at 0,1,3,6 months.

Result: Patients in group-1, 2 and 3 showed significant decrease in the values of Schirmers and TUBT from the baseline over six months. In patients in group-4 there was decrease in mean values of Schirmer's test and TBUT from the baseline but that were not significant. Mean corneal thickness and endothelial cell count did not change significantly from the baseline mean value in all the 4 groups.

Conclusion: On the basis of above study changes were seen in Schirmer's test, tear film function and staining pattern of conjunctival and ocular surface with use of antiglaucoma medication. These all factors can cause ocular surface disorders which can affect the quality of life as well compliance of the patient. There was no effect seen on corneal thickness as well as endothelial cell count in these patients.

drmanik84@gmail.com