# Dorzolamide Favorably Effects on Ocular Hemodynamics in Glaucoma Patients

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Background: Dorzolamide, a topical carbonic anhydrase inhibitor, has been suggested to have some better effects on ocular circulation in addition to ocular hypotensive effect.

Purpose: The effects of dorzolamide on ocular hemodynamics were investigated by laser speckle imaging in 10 glaucoma patients, using charge-coupled device laser speckle flowgraphy (CCD LSFG).

Method: To evaluate the optic nerve head and peripapillary chorioretinal blood flow, the mean blur rate (MBR) was measured by CCD LFSG before and 2 months after the administration. And blood pressure (BP), intraocular pressure (IOP) and ocular perfusion pressure (OPP) were also measured.

Results: Upon the administration of dorzolamide MBR of both optic nerve head and peripapillary chorioretina were increased. Particularly at optic disc cupping and infero-temporal peripapillary chorioretina, the MBRs were significantly increased from 3.95 ± 2.18 to 5.23 ± 3.18, 3.02 ± 1.90 to 3.64 ± 1.56 after administration, respectively ($p<0.05$). The IOPs were significantly decreased 15.8 ± 2.5 mmHg at baseline to 13.8 ± 2.3 mmHg at 2 months after the administration ($p<0.0005$). However there were no changes in BP and OPP.

Conclusion: These results suggest that the dorzolamide could have neuroprotective effects on glaucomatous optic neuropathy.