

Role of Diuretics as a Risk Factor for Posterior Vitreous Detachment

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BACKGROUND: Although dehydration is a known predisposing condition for posterior vitreous detachment (PVD), no data are available on the effect of systemic therapies that act on hydro-saline metabolism such as cardiovascular drugs, with particular regard to diuretics.

PURPOSE: to verify whether diuretic agents are a risk factor for DPV development.

METHODS: A retrospective case-control study was conducted. The clinical records of 204 patients suffering from high blood pressure who needed an eye examination were reviewed to identify possible risk factors for the development of PVD. All participants were 40 years or older with an history of pharmacologically treated arterial hypertension and no significant eye diseases apart from presbyopia or slight refractive errors, not higher than 2 diopters as a spherical equivalent. PVD was diagnosed by means of slit lamp with an additional 90 diopter lens.

RESULTS: DVP was observed in 63% (128 out of 204) of the recruited patients. Applying a multivariate regression analysis, furosemide ($r = 0.37$; $P < 0.001$) was correlated with PVD, whereas no correlation was observed with thiazidic diuretics ($r = -0.1$; $P = ns$). On the other hand, calcium channel blockers appeared to play a protective role ($r = -0.24$; $P = 0.004$). No correlation was pointed out with other anti-hypertensive drugs.

CONCLUSION: Furosemide treatment represents a risk factor for developing PVD. In patients at risk of PVD or retinal detachment or other posterior retina diseases, particular attention should be focused on the choice of anti-hypertensive therapy, avoiding the use of furosemide unless absolutely necessary.