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Cytometry flow analysis on vitreous samples from patients with Rhegmatogenous Retinal Detachment

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Biography

Georgios Batsos is a ophthalmologist in Ophthalmology Department, University Hospital Of Ioannina, Ioannina, Greece.

Purpose: Measurement of various inflammatory mediators with cytometry flow analysis, in vitreous samples from patients with rhegmatogenous retinal detachment (RRD) and investigation of potential association with proliferative vitreoretinopathy (PVR).

Materials and Methods: Vitreous samples from 34 patients (24 with RRD and 10 controls) were collected and analyzed with cytometry flow. In the control group control 2 had vitreomacular traction syndrome (VMT) (n=2), 6 had idiopathic epiretinal membrane (iERM) (n=6) and 2 had full thickness macular hole (FTMH) (n=2). Moreover in the RRD group other clinical characteristics, such as PVR level, lens status, symptoms' duration and quadrants of involvement, were assessed. Statistical analysis was performed.

Results: The levels of IL6, IL8, ICAM-1, VCAM, MCP-1 and LCN2 were significantly higher in RRD group as compared to controls. Significantly elevated concentrations of IL8, VCAM and LCN2 were noticed in the PVR B and C group as compared to the PVR A and no PVR group. High expression of VCAM and LCN2 was noticed in pseudophakic as compared to phakic RRD patients. There was also a significant association between quadrants of involvement and IL6, IL8, MCP-1, VCAM as well as LCN2. Duration of symptoms seems to be correlated mostly with the levels of IL8, ICAM-1, VCAM and LCN2. Regarding LCN2, after multivariate linear regression analysis, only PVR was independently related with LCN2 concentration (coefficient b=2.97, 95% confidence interval = 1.89 to 4.67, p<0.001).

Conclusion: This study provides a better insight into the pathophysiology of rhegmatogenous retinal detachment. Larger studies could confirm these results indicating new therapeutic targets for PVR such as LCN2.

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