

## CELL CULTURE OF PRERETINAL MEMBRANES FROM PROLIFERATIVE VITREORETINOPATHY AND MACULAR PUCKER

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The purpose of the present study was to investigate *in vitro* behaviors of the cellular components of surgical excised preretinal membranes from patients with proliferative vitreoretinopathy (PVR) and macular pucker. Surgical excised membranes were plated in culture dishes by an explant method and cultured with F12 medium supplemented with 30% fetal bovine serum. Some cultures were studied with immunocytochemical methods to identify the cell types. In 12 PVR patients, 10 cases exhibited cell outgrowth from the membranes (83.3%), cells proliferated to confluence in 5 cases (41.7%). Based on morphological and immunocytochemical study, retinal pigment epi-

thelial cells (RPE), glial cells, and macrophages were identified in the outgrowth from these membranes. In subcultures, virtually all cells were RPE. Follow-up study of 12 PVR patients showed that in 5 cases with cell proliferation, all had relapse of retinal detachment; in 7 cases without cell proliferation, only 1 case had relapse. No cell outgrowth was observed in 2 cases of macular pucker. The present study indicates that some cells in membranes from PVR patients, predominantly RPE, some exhibited active proliferation. The growth capacity of the cells in culture exhibited a relationship with the prognosis after surgery.

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