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Smoking and Cataract (in vitro 1)

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To investigate the cellular change and cell death mechanism in cultured human lens epithelial cells induced by smoking.Cultured lens epithelial cells were challenged with 200, 400, 600, 800, 1000 uM of Cadmium chloride(CdCl2, Catalog No. 202908,Sigma-Aldrich Chemical Co, USA) for 2 hours, and then were exposed to UV(280-320nm/ 1.2mv/ cm2). The cell vialbility was evaluated using the microscpe and 3-(4,5-dimethylthiazol -2-yl)-2,5-dipheny tetrazolium bromice (MTT) assay. The gene and protein level of caspase-8 and P53 were measured after exposed to CdCl2(600uM) for 2 hours by using RT PCR and western blot.Compared to untreated cell, the cell death increased after Cadmium chloride exposure in microscopic finding. And MTT assay demonstrated that the cell death was increased in proportinal to the increased Cadmium chloride concentration. The expression of caspase-8 and P53 level all increased after UV exposure in RT PCR and western blot.