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The protective effect of simvastatin against UVB-induced corneal endothelial cell death

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Ultraviolet B (UVB) radiation is a risk factor for uveitis, and excessive UVB exposure causing corneal endothelium injury, including apoptosis, is a serious condition. Therefore, drugs that can inhibit apoptosis in corneal endothelial cells represent an effective strategy for treating uveitis. Simvastatin is widely used as a specific inhibitor of 3-hydroxy-3-methyl-glutaryl-CoA reductase, can reduce levels of low density lipoprotein (LDL) cholesterol, and exerts anti-inflammatory effects. However, the effect of simvastatin on uveitis remains unclear. Therefore, the aim of this study was to elucidate whether UVB promotes the initiation of apoptosis in corneal endothelial cells and subsequently contributes to uveitic injury reversible by simvastatin treatment. Our findings indicated that simvastatin alleviated UVB-induced corneal endothelial cell apoptosis via caspase-3 activity.

Biography

Yi-Ru Ho completed her Graduation from Department of Molecular Biology and Human Genetics, Tzu Chi Universit. Currently, she is a Research Assistant in Department of Medical Research Chang Bing Show Chwan Memorial Hospital. She is interested in "Primary cell culture of ADMSC, cell culture of neuron cell, MTT assay, DNA extraction, qPCR, Western blot, flow cytometry of cell cycle and cell marker, Luciferase assay, siRNA transfection, Enzyme-linked immunosorbent assay, intraperitoneal injection of mice".

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