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사이클로스포린이 혈관내피세포 자멸사에 미치는 영향

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Effect of Cycloporine on the Apoptosis in Endothelial Cells

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The immunosuppressive drug cyclosporine (CsA) is a potent agent widely used after organ transplantations and various autoimmune disorders. After using CsA, some patients suffer severe complications including renal and vascular toxicity. The renal or vascular toxicity is influenced by the degree of the endothelial damage. Several recent studies have demonstrated that CsA treatment directly induces apoptosis in several cell types. Thus, CsA may induce endothelial damage via the activation of proapoptotic proteins. The present study was undertaken to investigate the effects of CsA on apoptosis of endothelial cells using human umbilical vein endothelial cells. Apoptotic cells were identified by fluorescence microscopy of 4', 6-diamidino-2-phenylidole (DAPI) stained nuclei. Western blot analysis was done for poly(ADP-ribose) polymerase (PARP), p27, p53 and caspase. And the reactive oxygen species (ROS) production was measured using 2

Key Words: 혈관내피세포, 사이클로스포린, 세포자멸사
Endothelial cell, Cyclosporine, Apoptosis