

Cyclosporine A 유도된 흰쥐모델에서 Everolimus가 췌장 및 신장손상에 미치는 영향

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Influence of Everolimus on Cyclosporine A-induced Pancreatic and Renal Injury in Rats

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Introduction: It is well known that sirolimus (SRL) aggravates cyclosporine A (CsA)-induced nephrotoxicity and pancreatic injury, but the influence of everolimus (EVL) on CsA-induced organ injury is undetermined. We performed study to evaluate the influence of EVL on CsA-induced organ injury in experimental model of chronic CsA nephropathy.

Methods: Rats were treated with CsA (15 mg/kg) with EVL or SRL (0.3 mg/kg) for 4 weeks. The influence of EVL on CsA-induced nephrotoxicity and pancreatic islet dysfunction was compared with those of SRL, and blood and tissue levels of each drug were measured.

Results: The EVL treatment alone did not cause severe pancreatic dysfunction and renal injury, but combined treatment with CsA aggravated CsA-induced pancreatic and renal injury. The CsA+SRL group showed increased the tissue CsA or SRL levels compared with CsA or SRL groups, but the CsA+EVL group did not show significant increase of tissue CsA or EVL levels compared with those of CsA or EVL group.

Conclusion: Combined treatment with CsA and EVL aggravates CsA-induced organ injury, but tissue deposition of EVL and CsA is less than that of SRL.

Key Words: Cyclosporine, Sirolimus, Everolimus, Concentration