

신 이식 환자에서 mTOR 억제제 사용 후 발생한 급성 세뇨관 괴사 1예

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A Case of mTOR Inhibitor-induced Acute Tubular Necrosis in a Kidney Transplanted-patient

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Case description: A 61-year-old woman who received kidney transplantation 16 years ago due to hypertensive chronic kidney disease, admitted this center with complaints of high fever and chilling sensation. She was taking Sirolimus as a component of a immunosuppressive regimen including tacrolimus, corticosteroid and Mycophenolate Mofetil (MMF). The initial laboratory studies revealed a serum creatinine level of 1.47 mg/dl (basal serum creatinine level, 1.3 mg/dl), a WBC count of 7500/mm³, a sirolimus level of 7.1ng/mL, a tacrolimus level of 2.0n g/mL and a CRP of 5.33 mg/dl. By imaging studies (non-contrast computed tomography scan), pneumonia was confirmed and antibiotics (ceftriaxone and clarithromycin) were started. After 10 days of antibiotic therapy, the serum creatinine and sirolimus level increased to 1.88 mg/dL and 16.6 ng/mL, respectively. Considering the drug interactions, sirolimus and clarithromycin were halted. The serum creatinine level rose gradually up to 2.43 mg/dl and kidney biopsy was done. On renal Biopsy, acute tubular necrosis, with eosinophilic granules in proximal tubular epithelium was noted, suggesting drug toxicity. After discontinuation of sirolimus and clarithromycin, the serum sirolimus TDM level decreased to 4.7ng/ml and also the serum creatinine returned to 1.39mg/dL.

Conclusion: This case reports the mTOR inhibitor-induced ATN, possibly due to the interaction with clarithromycin, in kidney transplanted-patient for the first time. Special attention should be paid to the possibility of nephrotoxicity of mTOR inhibitor, sirolimus.

Key Words: 시로리무스, 급성 신장 요세관 괴사, 신장 이식

Sirolimus, Acute kidney tubular necrosis, Kidney transplantation