The Efficacy and Safety of Tacrolimus in the Treatment of Refractory Lupus Nephritis

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Background: This study was conducted to find out the efficacy and safety of the tacrolimus for the treatment of refractory lupus nephritis.

Methods: This study was the open-labeled pilot study conducted for 6 months. Nine patients with biopsy-proven diffuse proliferative lupus nephritis (WHO Class IV) which was refractory to the therapy of more than three times of cyclophosphamide pulse were recruited for this trial and treated by the regimen of tacrolimus (starting dose of 0.1 mg/kg/day, and after adjusted by the optimal trough level of tacrolimus) and prednisolone (0.8 mg/kg/day for 2 months and then tapered). We compared the urine protein creatinine ratio (urine PCR), serum creatinine, and several parameters at each time of baseline, second, 4th, and 6th month for evaluation of the efficacy and safety of the tacrolimus.

Results: The 9 consecutive patients were recruited. The male patient was just one and the rest of the patients were female. The mean age was 34.56±10.53 years. The mean cumulative dosage of cyclophosphamide was 12.72±6.83 gram and the mean duration of lupus nephritis was 55.09±56.43 months. The baseline laboratory findings were as followed: mean serum creatinine 1.39±0.61 (0.7~2.3)mg/dL, mean urine PCR 2.27±0.69, mean C3 125.22±21.62 mg/dL, mean anti ds DNA 13.03±24.33 IU/mL. Three (33%) patients had severely deteriorated renal functions (serum creatinine over 2 mg/dL), During the period of the treatment, the proteinuria was reduced significantly, starting from the second month of the treatment (1.24±0.63, 1.28±0.83, 0.97±0.98; p<0.01, by repeated measures ANOVA). The renal functions of most patients were substantially unchanged except one patient. That patients had increase in serum creatinine by 40% compared by baseline because of the disease progression not the drug toxicity. Just one patient had a transient hyperglycemia during the treatment. There was no serious adverse event.

Conclusion: Tacrolimus might be an effective alternative option for the treatment of the refractory lupus nephritis patients.

Key Words: 난치성루푸스신염, 루푸스, 타크로리무스

Lupus nephritis, Tacrolimus, Refractory lupus nephritis