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면역글로불린A 신질환 환자에서 고용량 스테로이드 치료의 효용성

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The Benefits of Steroid Pulse Therapy in IgA Nephropathy

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Introduction: The benefits of steroid pulse therapy in immuniglobulin A nephropathy (IgAN) have not been established.

Methods: We investigated the effect of methylprednisolone (MP) pulse therapy in 23 IgAN patients (7 males, 16 females) with established renal impairment-below stage 3 CKD (median eGFR, 35.19 ml/min/1.73m2) or massive proteinuria (urinary albumin to creatinine ratio, 3096.7 mg/g) with histological active IgAN (median histological Grade 3).

Observation period of pre-treatment were range 2 to 20 months and all patients were already maintained on angiotensin receptor blocker or angiotensin-converting enzyme inhibitors. These patients received intravenous methylprednisolone 500mg every 2 weeks for 6 months to improve renal function. One patient was dropped out after steroid pulse therapy. The efficacy of MP pulse therapy was analyzed by comparing the slopes of the eGFR (ml/min/1.73m^2) and urine albumin/creatinine ratio (mg/g) between pre-treatment and treatment period using the linear regression coefficients.

Results: The linear regression analysis showed the improvement of the monthly decline of eGFR in 19 patients (pre-treatment vs treatment, -0.790 ± 0.202 vs 0.334 ± 0.647. p=0.001), but unfortunately no improvement was observed in 3 patients. However, urinary albumin to creatinine ratio had no improvement between pre-treatment and treatment period (-0.059 ± 0.777 vs -0.22 ± 0.764, p=0.705) in 19 patients. Especially the slope of eGFR was converted to positive value in five patients who had treatment-initial eGFR more than 43 ml/min/1.73m^2 (0.765 ± 0.239 vs -0.031 ± 0.027 p=0.005). When the MP pulse therapy was performed in one patient who had massive proteinuria with normal eGFR (urine albumin/creatinine ratio, 3096.7 mg/g; eGFR 103.7 ml/min/1.73 m^2), the amount of proteinuria was decreased to 513 mg/g without declining of eGFR. MP pulse therapy was well tolerated except one patient to whom the therapy was discontinued because of facial flushing and palpitation. There were no serious adverse events in any other patients throughout study period.

Conclusion: We found that intravenous methylprednisolone 500mg every 2 weeks for 6 months, might delay the progression of renal impairment in IgAN who had already renal dysfunction or massive proteinuria.

Key Words: 면역글로불린A, 고용량 스테로이드, 효용성
IgA, Steroid pulse, Effect