The effect of steroid pulse therapy for the reduction of acute rejection episode in subclinical borderline changes: an open-label, randomized clinical trial

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Background: Subclinical rejection (SCR) has been correlated with subsequent chronic allograft nephropathy and allograft dysfunction. SCR is known to be effective in steroid pulse therapy (SPT) in other studies. However, there is controversy about borderline change. The purpose of this study is to investigate the effect of early SPT for the reduction of acute rejection episode during the first year after renal transplantation in the patients who will show subclinical borderline changes at 2-week protocol biopsy.

Methods: This study was a randomized clinical study in which 17 recipients with stable kidney graft function and borderline changes in the protocol biopsy at 2 weeks were enrolled. The recipients were divided into two groups depending on steroid pulse therapy. We investigated changes in Banff scores through protocol biopsy after 1 year.

Results: Recipients who underwent acute cellular rejection and borderline change within 1 year were four patients (50%) in the no SPT group and 6 patients (66.7%) in the SPT group, and there was no difference between the two groups ($P=0.637$). There was no difference between the two groups in the change of the Banff score between the 2 weeks and 1 year protocol biopsy. And there was no difference in the rates of opportunistic infections including cytomegalovirus ($P=0.471$) and BK polyomavirus ($P=0.637$). Also, there was no difference between the two groups with respect to creatinine and estimated glomerular filtration rate at 2 weeks to 3 years after surgery.

Conclusions: There was no difference in Banff score change, infection rate, and graft function between the two groups. In conclusion, we suggest that SPT is not essential in subclinical borderline change.

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