Comparison of prognosis at different level of antithymocyte globulin in kidney transplantation

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Background: In high-risk recipients in kidney transplantation, antithymocyte globulin (ATG) induction therapy is important for prognosis. However, due to the complication such as pancytopenia, dose of ATG needs to be decreased sometimes. In this study, we compared prognosis including graft survival at different level of ATG.

Methods: This is a retrospective study including 771 patients who underwent kidney transplantation at Seoul St. Mary's Hospital, South Korea, between January 1, 2015, and December 30, 2019. Receiver operating characteristic curve analysis was used to compare the graft survival and overall patient survival of conventional dose of ATG group and decreased dose of ATG group. Comparison analysis between the two antithymocyte globulin dose groups was performed.

Results: A total of 771 patients were enrolled in the study with a mean age of 48.73 ± 11.49 years (range, 16–75 years). There was significant difference in donation type (living or deceased, family or not) and graft failure in follow-up but no difference in other variants. By using Kaplan-Meier method, graft survival was significantly higher in conventional ATG dose group than that of using low dose ATG group ($P=0.027$). Otherwise, overall patient survival was not significantly different in two groups.

Conclusions: In this study, graft survival of patient group with conventional dose of ATG was significantly higher than those with low dose of ATG. Thus, if pancytopenia occurs, a major cause of reducing dose, it would be more advantageous to maintain conventional dose if possible after blood transfusion and medication.

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