Low dose anti-thymocyte globulin versus basiliximab as induction in standard risk kidney transplant patients: 5-year follow-up

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Background: Kidney transplantation has significantly improved survival and quality of life of patients with end-stage renal disease and is considered the best form of renal replacement therapy. Rabbit anti-thymocyte globulin (rATG) has commonly been reserved for high immunologic risk patients and the resulting profound depression in immune response is associated with an increased risk for infection.

Methods: A retrospective cohort of patients transplanted from June 2012 to December 2014 was done to evaluate the short- and long-term outcome and efficacy of low dose rATG versus basiliximab as induction. CNI-based triple immunosuppression was given to the majority of patients.

Results: Among 165 patients in the study, 131 were given basiliximab and 34 were given low dose rATG (1–1.5 mg/kg/day for 3 days). The two groups were similar in mean age, native kidney disease, and cytomegalovirus (CMV) status. Higher proportion of patients who received rATG had positive panel reactive antibody ($P=0.0003$), higher human leucocyte antigen mismatches ($P=0.0023$), and non-related donors ($P=0.025$). Low dose rATG and basiliximab as induction therapy resulted in comparable outcomes including DGF, graft function, proteinuria, incidence of acute rejection and post-transplant malignancy. Incidence of infection was significantly higher in basiliximab group at 3-year post-KT: 11.5% vs. 0, $P=0.04$. CMV infection occurred very low at an overall rate of 0.6% at 1- and 3-year post-KT. Graft and patient survival at 5-year post-KT were 96.9% vs. 97.1%, $P=0.99$ and 99% vs. 100%, $P=0.57$, respectively.

Conclusions: Both low dose rATG and basiliximab induction resulted in excellent long-term outcomes. Low dose rATG was not associated with higher infection rates and can be used safely in standard risk patients.

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