Clinical outcomes in elderly kidney transplant recipients: emphasis on choice of induction immunosuppressive therapy

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Background: Patients waiting for kidney transplantation (KT) and recipients who underwent KT over age of 60 years are increasing annually. The increased age of the recipients is known to be associated with decrease in the rejection rate. However, infections are more frequent in older recipients. The aim of this study was to evaluate the infection and rejection rate according to the recipients' age and induction agents.

Methods: All patients who underwent KT from June 2011 and April 2019 were retrospectively reviewed. The patients were divided into four groups according to their age (< 60 years and 60 years) and the type of induction agents used (basiliximab 20 mg twice and rabbit anti-thymocyte globulin [r-ATG] 1.5 mg/kg for 3 days).

Results: The 704 recipients were included (basiliximab and young age group, n=287 [40.8%]; basiliximab and old age group, n=59 [8.4%]; r-ATG and young age group, n=238 [33.8%]; basiliximab and old age group, n=120 [17.0%]). The rejection rate within 1 year was similar between young and old age group regardless of the type of induction agents. Cytomegalovirus antigenemia, BK viremia, *Pneumocystis carinii* pneumonia, pneumonia, and blood stream infection rate within 1 year were similar between young and old age group in basiliximab (P=0.200, P=0.244, P=0.312, P=0.248, and P=0.064 respectively); however, they were significantly higher in the old age group in r-ATG (P<0.001, P=0.036, P=0.037, P=0.049 and P=0.008 respectively).

Conclusions: The rejection rate and most of the infections were not influenced by age when basiliximab was used as an induction agent. The rejection rate was not significantly different between the young and old age group; however, most of the infections were more common in old age group when r-ATG was used as an induction agent. Thus, dose reduction of r-ATG might be needed for elderly patients.

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