

Renal re-transplantation: An ideal treatment for primary allograft failure



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INTRODUCTION

Renal re-transplantation has emerged as an important treatment following failed of primary allograft. However, it raises conflicting results about safety and efficacy. This article aims to compare the short-term and long-term complications of renal re-transplantation with first transplantation and to evaluate the factors that influence these outcomes.

This project was conducted in collaboration with Shahid Beheshti University of Medical Sciences, which provided patient data.

METHOD

We conducted a retrospective analysis encompassing kidney re-transplanted recipients between 2009 and 2022 in three referral hospitals. We identified 5 third (male 4, female 1; mean age = 42.4) and 88 second (male 61, female 27; mean age = 39.08) transplantations, compared with 143 (male 90, female 53; mean age = 41.58) randomly selected first transplantations. Data collection included short-term and long-term complications (hematoma, hemorrhage, acute and chronic rejection, mortality, cardiovascular complications, infection rate, and urological disorders), hospitalization durations, demographic characteristics, dialysis, induction treatment, surgical techniques, the degree of PRA, and anti-HLA Ab levels.

RESULT

We did not observe any significant differences between first, second, and third transplantations regarding hospitalization duration, age of transplantation, post-operative blood transfusion, creatinine at discharge, and graft dysfunction concerning mortality rate.

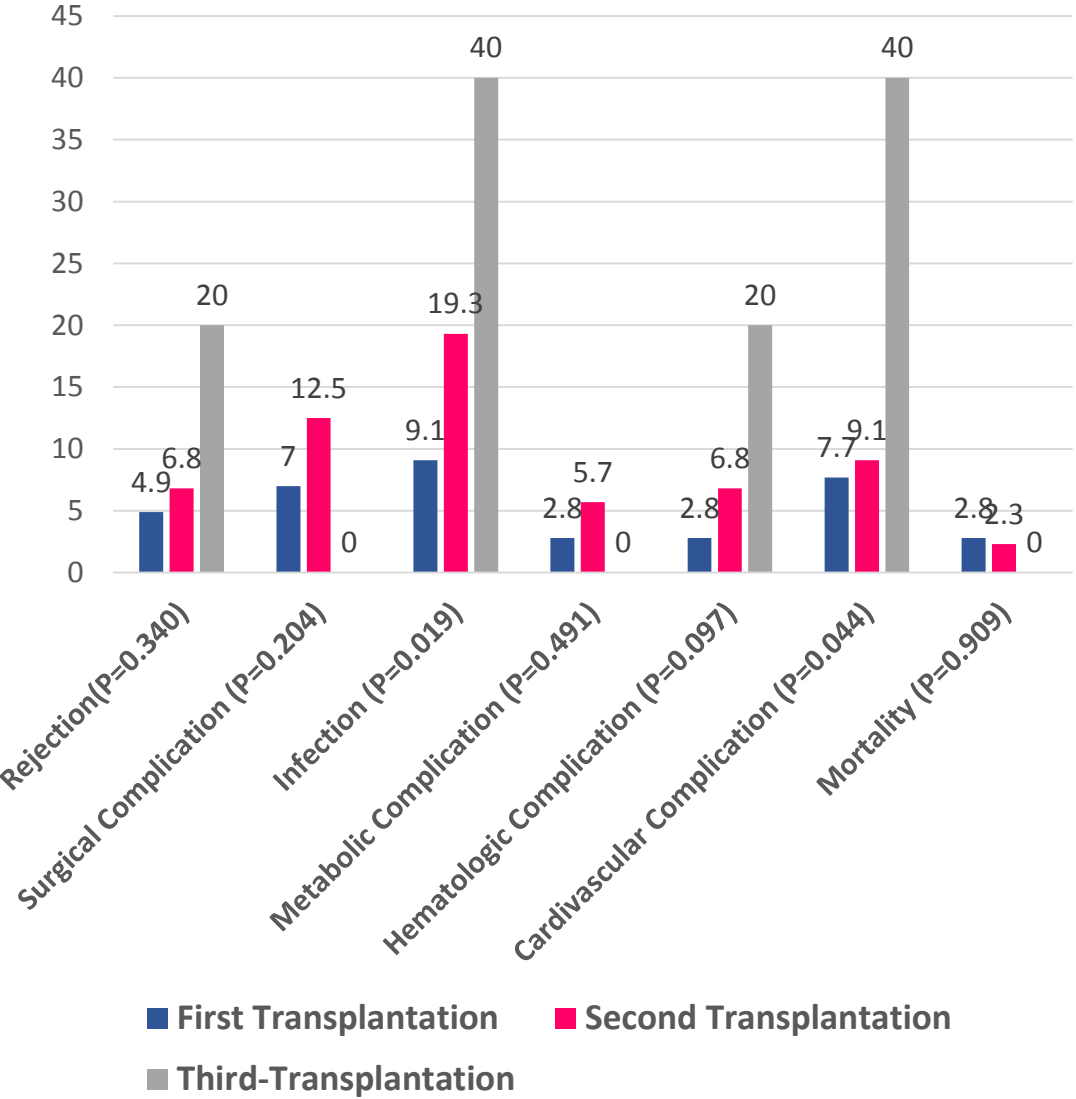
On the other side, both short-term complications ($P=.008$) and long-term complications ($P=.002$) were more prevalent in re-transplantations compared to first transplantations.

Re-transplanted patients experienced higher long-term rejection rates than recipients of a first kidney transplant ($P=.034$). In contrast, there was no significant difference between the short-term rejection rates of the three groups ($P=.340$).

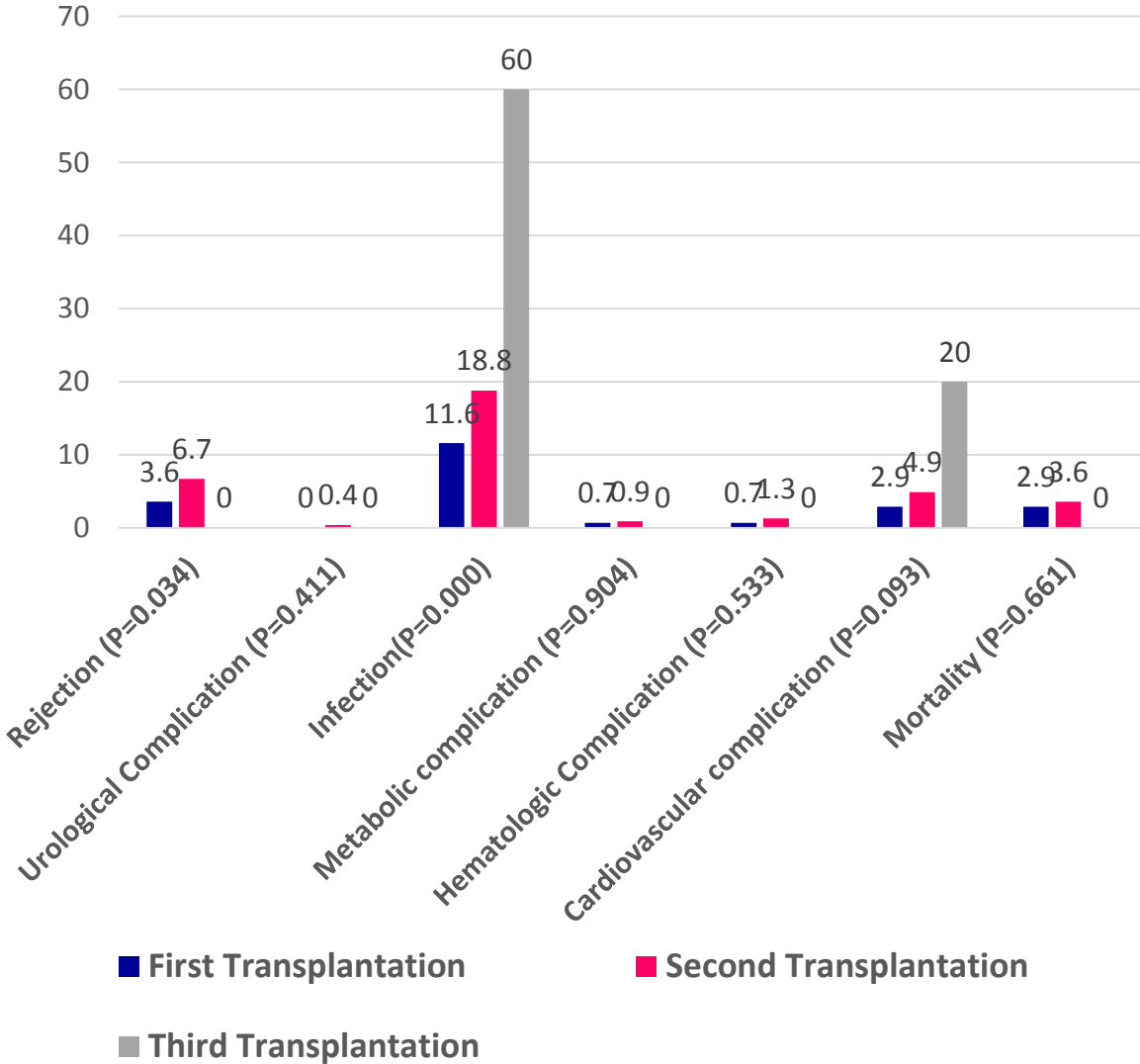
Re-transplantations displayed a higher infection rate in both short-term ($P=.019$) and long-term ($P=.000$) follow-up and also significantly longer duration of surgery ($P=.000$), although it associated with greater HLA incompatibility ($P=.000$), increase in PRA levels ($P=.000$), and induction treatments ($P=.006$).

The common causes of previous kidney allograft rejection among re-transplanted patients were infections (27.5%), vascular disease (18.8%), and not taking immunosuppressant medication (11.6%).

Percentage of Short-Term complications: First Transplantation vs. Re-Transplantation



Percentage of Long-Term Complications: First Transplantation vs. Re-Transplantation



CONCLUSION

The comparison between the first kidney transplantation and re-transplantation has shown acceptable results, but more prospective studies are necessary for considering of each influential factor on graft survival.

THANK YOU