



Renal Transplantation in Elderly Recipients: A Single-Center Experience

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ABSTRACT

Background. Chronic renal failure is a disease of the elderly, who are the fastest growing population of dialysis patients and those waiting for kidney transplantation. The objective of this study was to analyze the results of the renal transplantation among recipients older than 60 years.

Methods. All renal transplant recipients older than 60 years at the time of transplantation were included in the study, which analyzed patient and graft outcomes.

Results. Among 1400 renal transplantations 80 patients were at least 60 years old, including 44 (55%) men and an overall mean age 67.3 ± 5.95 (range = 60 to 72). One-, 3-, 5-, and 10-year patient survivals were 92.25%, 87.79%, 73.56%, and 64.32%, respectively. One-, 3-, 5-, and ten 10-year death-censored graft survivals were 92.11%, 87.71%, 72.32%, and 62.12%. The most common complications were cardiovascular and infectious.

Conclusions. Our single-center results confirmed that transplantation is a good option for renal replacement therapy among patients older than 60 years.

CHRONIC RENAL FAILURE is a disease of the elderly. The incidence of end-stage renal disease (ESRD) increases with advancing age. The elderly are the fastest growing population on dialysis. Nowadays, patients older than 60 years account for more than 53% of the population requiring renal replacement therapies.¹ The increasing number of ESRD patients older than 60 years raises questions about the choice of renal replacement therapy. Transplantation is generally believed to be the best treatment for ESRD patients: short-term patient and graft survivals are good in elderly renal failure patients.² There are few published studies with long-term results in this particular population.³ In this retrospective single-center study, we have reported short- and long-term follow-up of kidney transplantation in patients older than 60 years.

METHODS

Between 1990 and 2007, a total of 1400 renal transplantation were performed in our center including 98 patients (7%) from living related, 1264 patients (90.3%) from living unrelated, and 38 (2.7%) from cadaveric donors. All patients underwent a standardized evaluation of all major organ systems, including cardiovascular disease, namely, coronary artery, cerebrovascular, peripheral artery vascular, congestive heart failure, valvular or valve repair surgery, atrial fibrillation, and cardiac ultrasound, stress thallium, and coronary angiography for disease. Examinations were performed

for malignancy, chronic obstructive pulmonary disease, tuberculosis, gastrointestinal comorbidity, such as peptic and duodenal ulcers, diverticulosis, diverticulitis, gastritis, or past gastrointestinal surgery. Herein, we have reported patient and renal allograft survivals at 1, 3, 5, and 10 years among recipients older than 60 years. Graft failure was defined as return to dialysis. Death of the recipient was considered to be a patient loss. Patient and graft survival rates were calculated using the Kaplan-Meier statistical method. Immunosuppressive therapies were steroids and cyclosporine combined with azathioprine or mycophenolate mofetil.

RESULTS

Among 1400 renal transplant recipients, 88 patients were at least 60 years old. Among these 88 patients, eight patients (9%) did not have a data set or were lost from follow-up. Among the remaining 80 patients, 44 (55%) were men and 36 were women of overall mean age of 67.3 ± 5.95 (range = 60 to 72). There were various causes of renal failure: hypertension ($n = 18$, 22%); diabetes mellitus ($n = 17$,

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21%) glomerulonephritis ($n = 14$, 18%) polycystic kidney disease ($n = 7$, 9%), chronic pyelonephritis ($n = 9$, 11%), unknown ($n = 15$, 19%). All elderly patients received living related or unrelated renal transplantations. The mean age of the donors was 29.4 ± 9.7 years. One-, 3-, 5-, and 10-year patient survivals of these patients were 95.3%, 89.8%, 84.6%, and 71.3%, respectively. One-, 3-, 5-, and 10-year graft survivals were 92%, 87.8%, 72.3%, and 62%, respectively. The most common cause of patient death was myocardial infarction and other cardiovascular complications (40%), infections and systemic sepsis syndrome (30%), gastrointestinal hemorrhage (15%), and unknown (15%).

DISCUSSION

Our study showed that patients older than 60 years seemed to benefit from renal transplantation, as shown by their excellent graft and patient survival rates. In this study the patient and graft survivals after 5 years were 73.6% and 72.3%, respectively. American centers have reported 5-year patient and graft survivals among recipients over 60 years ranging from 64% to 68% and from 55% to 62%, respectively.^{4,5} The UK National Data Base indicated that cadaveric kidney graft survival was slightly more than 50% among patients older than 60 years.⁶ The superiority of the 5-year survival in our study was probably due to the use of living donor renal transplantation. In another single-center study from Iran by Ossareh and Ghods, 1-, 5-, and 10-year graft

survivals were 91.2%, 72.2%, and 61.2% in renal transplant recipients older than 55 years⁷ result probably explained by a low rejection rate and immune-related graft loss in the elderly as previously reported.⁵ Patient and graft survivals in our elderly population were similar to those reported in younger recipients.⁷ None of our patients was older than 68 years. Before transplantation all patients underwent extensive assessment for cardiac and infectious risks, which may explain the higher allograft and patient survival rates in our study. Based on negative findings in these tests, we consider patients over 60 years to be potential recipients.

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