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Preemptive Kidney Transplantation in Systemic Lupus Erythematosus

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Preemptive kidney transplantation is associated with superior outcomes. Patients who have kidney failure due to systemic lupus erythematosus (SLE) may not receive a preemptive kidney transplant because of the concern for risk of disease recurrence with shortened graft and patient survival. We identified 8001 patients in the United Network for Organ Sharing dataset who underwent kidney transplantation between October 1987 and February 2009 with kidney failure due to SLE. Seven hundred thirty patients received a preemptive kidney transplant with 7271 patients who were on dialysis before transplantation; their mean ages were 40.0 ± 11.6 years and 36.9 ± 11.7 years, respectively, (P < .01). Women constituted 82.5% of preemptive and 81.4% of non-preemptive groups (P = .47). Preemptive transplant recipients were more likely to receive a living donor kidney transplant (odds ratio [OR] = 3.6; 95% confidence interval [CI] = 3.3–4.5; P < .01). In unadjusted analyses, preemptive transplantation was associated with lower risk of recipient death (hazard ratio [HR] = 0.52; 95% CI = 0.38–0.70; P < .01). The difference remained significant after adjustment for covariates (HR = 0.55; 95% CI = 0.36–0.84; P < .01). Graft survival was also superior among preemptive kidney transplant recipients in both unadjusted (HR = 0.56; 95% CI = 0.49–0.68; P < .01), and adjustment analyses (HR = 0.69; 95% CI = 0.55–0.86; P < .01). We concluded that preemptive kidney transplantation among patients with SLE was associated with superior patient and graft outcomes and should be considered when feasible.

Preemptive kidney transplantation is associated with superior outcomes.1–3 Patients who have kidney failure due to systemic lupus erythematosus (SLE) may not receive a preemptive kidney transplant because of concern for disease activity and risk of recurrence in the transplanted kidney that may lead to shortened graft and patient survival.4–5 Our primary objective was to compare kidney transplant and recipient outcomes in preemptive and non-preemptive recipients with kidney failure due to SLE.

METHODS
All patients in the United Network for Organ Sharing dataset who underwent a kidney transplant with kidney failure due to SLE were analyzed. Graft and patient survival for the preemptive and non-preemptive groups, defined by a lack of or prior exposure to dialysis, was determined by using the Kaplan-Meier and Proportional Hazards techniques, with adjustment for confounders known to impact outcomes.

RESULTS
We identified 8001 patients who underwent a kidney transplant between October 1987 and February 2009 with kidney failure due to SLE. Seven hundred thirty patients received a preemptive transplant with 7271 patients who were on dialysis before transplantation, with a mean age of 40.0 ± 11.6 years and 36.9 ± 11.7 years (P < .01), respectively. Women constituted 82.5% of preemptive and 81.4% of the non-preemptive groups (P = .47). Preemptive transplant recipients were more likely to receive a living donor kidney transplant (OR = 3.6; 95% CI = 3.3–4.5; P < .01).

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This difference remained significant after adjustment for covariates which have been associated with patient survival (HR = 0.55; 95% CI = 0.36–0.84; P < .01). Similarly, patients who underwent a preemptive kidney transplant had lower risk of graft failure (HR = 0.56; 95% CI = 0.49–0.68; P < .01; Fig 1). The reduced risk for renal allograft failure remained significant after adjustment for factors that have been known to impact graft survival (HR = 0.69; 95% CI = 0.55–0.86; P < .01).

DISCUSSION

Preemptive kidney transplantation has been associated with superior graft and patient outcomes.1–3 The primary objective of this study was to compare posttransplant outcomes among patients with kidney failure due to SLE because it has been proposed that pretransplant dialysis in patients with lupus nephritis may permit the disease to become quiescent, hence reducing the risk of disease recurrence in the transplant kidney and improve graft survival.4,5 However, the current study alleviates such concerns and confirms the association of preemptive kidney transplantation with superior graft and patient survival in patients with SLE. Based on these findings, we suggest that patients with SLE should be considered for a preemptive kidney transplant whenever feasible.

REFERENCES


Fig 1. Kidney allograft survival among preemptive and non-preemptive kidney transplant recipients with kidney failure due to systemic lupus erythematosus.