RECURRENT AA AMYLOIDOSIS AFTER RENAL TRANSPLANTATION: EFFECTS ON ALLOGRAFT SURVIVAL

Irem Sarihan[1], Banu Senates[2], Safak Mirioglu[1], Nurhan Seyahi[2], Taner Basturk[3], Abdulmecit Yildiz[4], Mehmet R. Altiparmak[2], Yasar Caliskan[1], Mehmet S. Sever[1]

[1]Istanbul University, Istanbul Faculty of Medicine, Department of Internal Medicine, Division of Nephrology
[2]Istanbul University, Cerrahpasa Faculty of Medicine, Department of Internal Medicine, Division of Nephrology
[3]Sisli Hamidiye Etfal Training and Education Hospital, Division of Nephrology
[4]Uludag University Faculty of Medicine, Department of Internal Medicine, Division of Nephrology

INTRODUCTION AND AIMS

Although end-stage renal disease (ESRD) related to AA amyloidosis is well characterized, there is limited data concerning patient and graft outcomes after renal transplantation (tx). The aim of this study is to evaluate the clinical features of, and risk factors for recurrent AA amyloidosis, as well as the effects of these factors on the ultimate outcome of renal allografts.

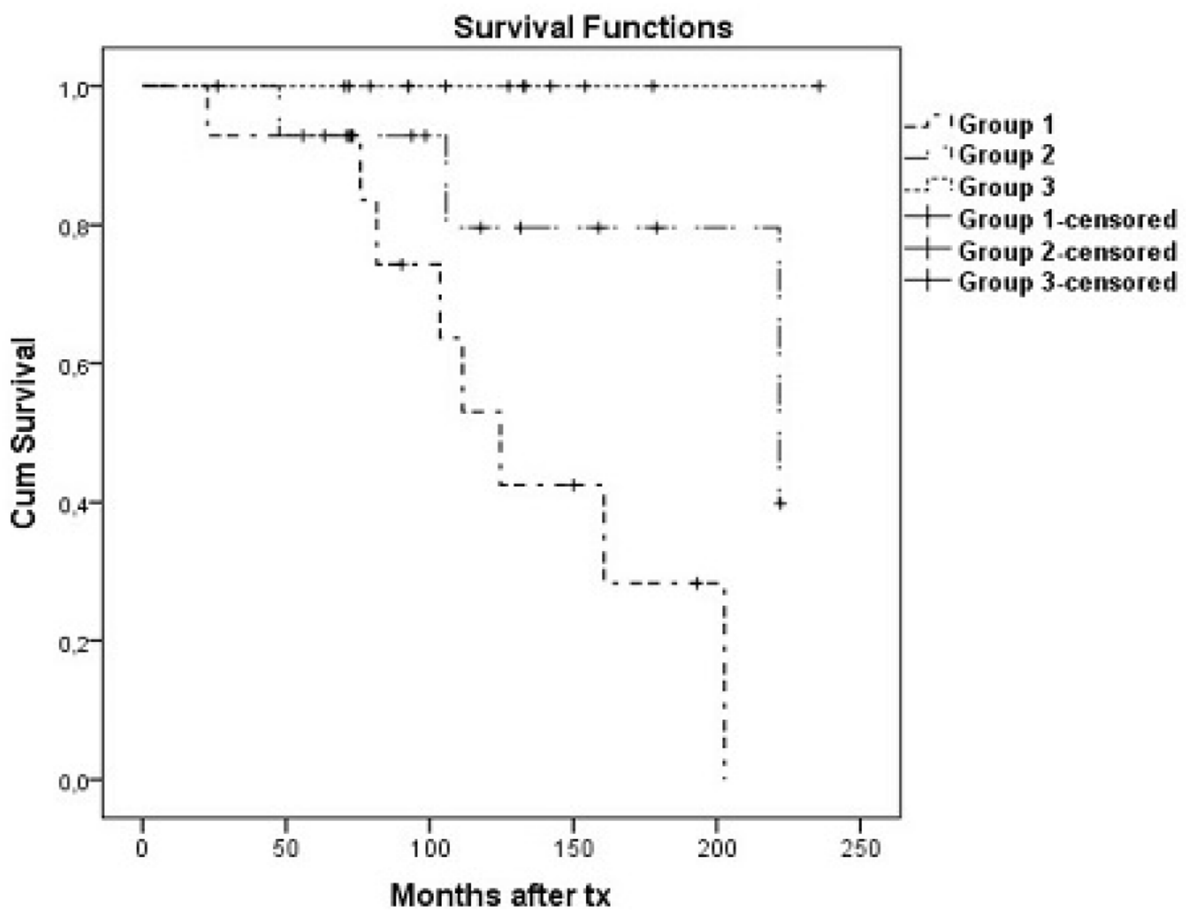
METHODS

In this multicenter study, overall 14 renal tx recipients with allograft biopsy-confirmed recurrent AA amyloidosis (group 1) [n=14, 12 (86%) male, mean age: 30±10 years, living donor tx: 10 (71%)], who were being followed-up for a mean duration of 119±56 months were evaluated. The features of these patients were compared with two control groups, which included consecutive and age, gender, donor type and timing of tx matched transplant recipients. The first control group consisted from renal tx recipients whose primary renal disease was amyloidosis; however, with no laboratory signs of recurrence in the renal allograft (group 2) [(n=14, 12 (86%) male, mean age: 34±11 years, living tx: 12 (86%)]. The second control group included patients whose primary renal diseases were other than amyloidosis (group 3) [(n=14, 12 (86%) male, mean age: 27±8 years, living tx: 11 (79%)]. The underlying etiology for AA amyloidosis in group 1 and 2 was familial Mediterranean fever (FMF). Patients, who were characterized by renal dysfunction (mean s. creatinine 1.42±0.54 mg/dL) and detectable proteinuria after 86±42 (20-160) months from tx were performed transplant biopsy. Post-tx events and graft survival of the study groups were evaluated.

RESULTS

The three groups were comparable with regard to patient age and gender, HLA mismatches, BMI, donor age and gender, post-tx immunosuppression. Graft loss rates were found significantly worse in the recurrent amyloidosis group [8 (57%)] compared to group 2 [3 (21%)] and group 3 [0 (0%)] control groups (p=0.002). During the follow up period 2 of the 14 (14%) patients died in group 1, while there was no patient loss in groups 2 and 3. Post-tx biopsy-confirmed rejection rates were similar across all groups; 3 (21%), 2 (14%) and 3 (21%) (p=0.83), respectively. Allograft survival of study groups by Kaplan–Meier analysis were as follows: group 1 (42.9%), group 2 (78.6%) and group 3 (100%) (p=0.003) (Fig. 1).

Figure 1



CONCLUSIONS

Recurrence of AA amyloidosis after renal tx is an important cause of graft dysfunction. The long term outcome of renal allografts complicated by recurrence of AA amyloidosis is unfavorable due to higher graft loss after tx, which may be associated with underlying continued activity of primary disease (FMF).

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