RECURRENT GLOMERULAR DISEASES AND ALLOGRAFT REJECTION

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INTRODUCTION AND AIMS

Recurrent glomerulonephritis (GN) is the third most frequent cause of renal allograft loss at 10 years after transplantation (tx)[1]. The exact prevalence of either recurrent or de novo post-tx GN is unknown because a considerable number of patients never undergo allograft biopsy, meaning that GN remains underdiagnosed[2]. The aim of this study is to evaluate the effects of recurrent GN on the prevalence, risk factors, clinicopathological features, and outcome of renal tx recipients.

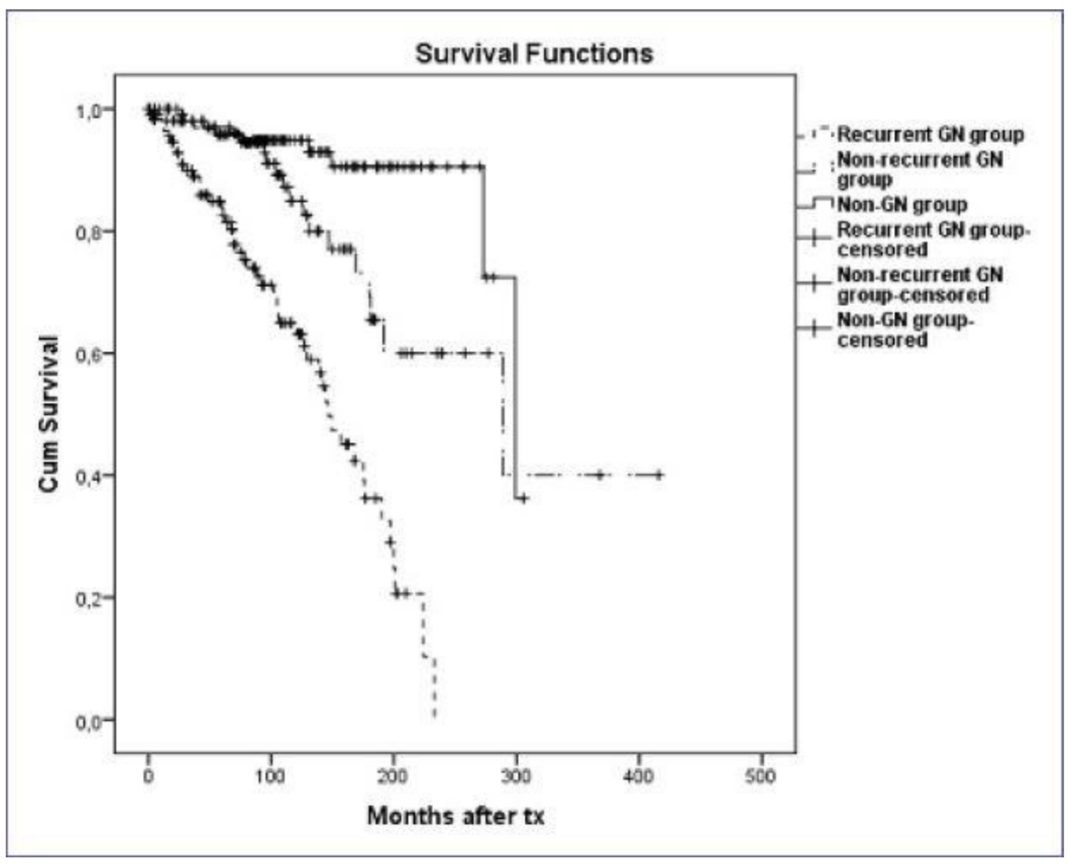
METHODS

Overall 120 renal tx recipients with biopsy-confirmed recurrent GN [87 (73%) male, mean age: 32±11 years, living donor tx: 96 (80%)] who were being followed up for a mean duration of 82±56 months were evaluated. The records of these patients were compared to control group, which included 110 renal tx recipients [(n=110, 75 (68%) male, mean age: 33±12 years, living donor tx: 94 (85%)] with non-recurrent primary GN (non-recurrent GN group) and control renal tx recipients with non-GN etiology [(n=114, 80 (70%) male, mean age: 33±11 years, living donor tx: 89 (78%)] (non-GN group). All of the groups were matched with the index cases with regard to age, gender, donor type and time of tx. The primary GN of the recurrent and the non-recurrent GN groups were matched as well. The risk factors for recurrent GN, post-tx events and graft survival were evaluated.

RESULTS

In the study group, recurrent GN were as follows: FSGS (n=58), IgA nephropathy (IgAN) (n=30), membranoproliferative GN (MPGN) (n=15), membranous nephropathy (MN) (n=9), HUS (n=6), lupus nephritis (n=1) and C1Q nephropathy (n=1). All patients were presented with renal dysfunction (mean s. creatinine 1.91±0.94 mg/dL) and proteinuria (2.6±3.2 g/24 h) at the time of diagnosis. Biopsy-confirmed allograft rejection was significantly higher in the recurrent GN group [24 (20%)] compared to non-recurrent GN [14 (13%)] and non-GN [8, (7%)] control groups (p=0.014). Graft failure rate was significantly higher in the recurrent GN group [49 (41%)] compared to non-recurrent GN [18 (16%)] and non-GN [9, (8%)] control groups (p<0.001) by Kaplan-Meier analysis (Fig. 1). Recurrent GN (HR:4.5, p=0.004) and biopsy-confirmed rejection (HR:3.58, p<0.001) predicted graft failure in the Cox regression analyses.

Figure 1: Kaplan-Meier analysis of allograft survival.



CONCLUSIONS

Recurrent GN is an important cause of graft dysfunction, and patients with recurrent GN have higher risk of allograft rejection. Allograft survival in patients developing GN recurrence is quite dismal, with a significant proportion of patients suffering from graft loss.

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