

The Outcomes of the Second Transplantation in Recurrent IgA Nephropathy

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Introduction

Recurrence of original glomerulonephritis is an important cause of graft loss. In some studies, histologic recurrence of IgA nephropathy occurs in 60% after 1st kidney transplantation. However, there is no evidence that we can persuade or dissuade second transplantation in patients with recurrent IgA nephropathy. In this study, we evaluated the outcomes of the second transplantations in patients who lost 1st graft due to recurrent IgA nephropathy.

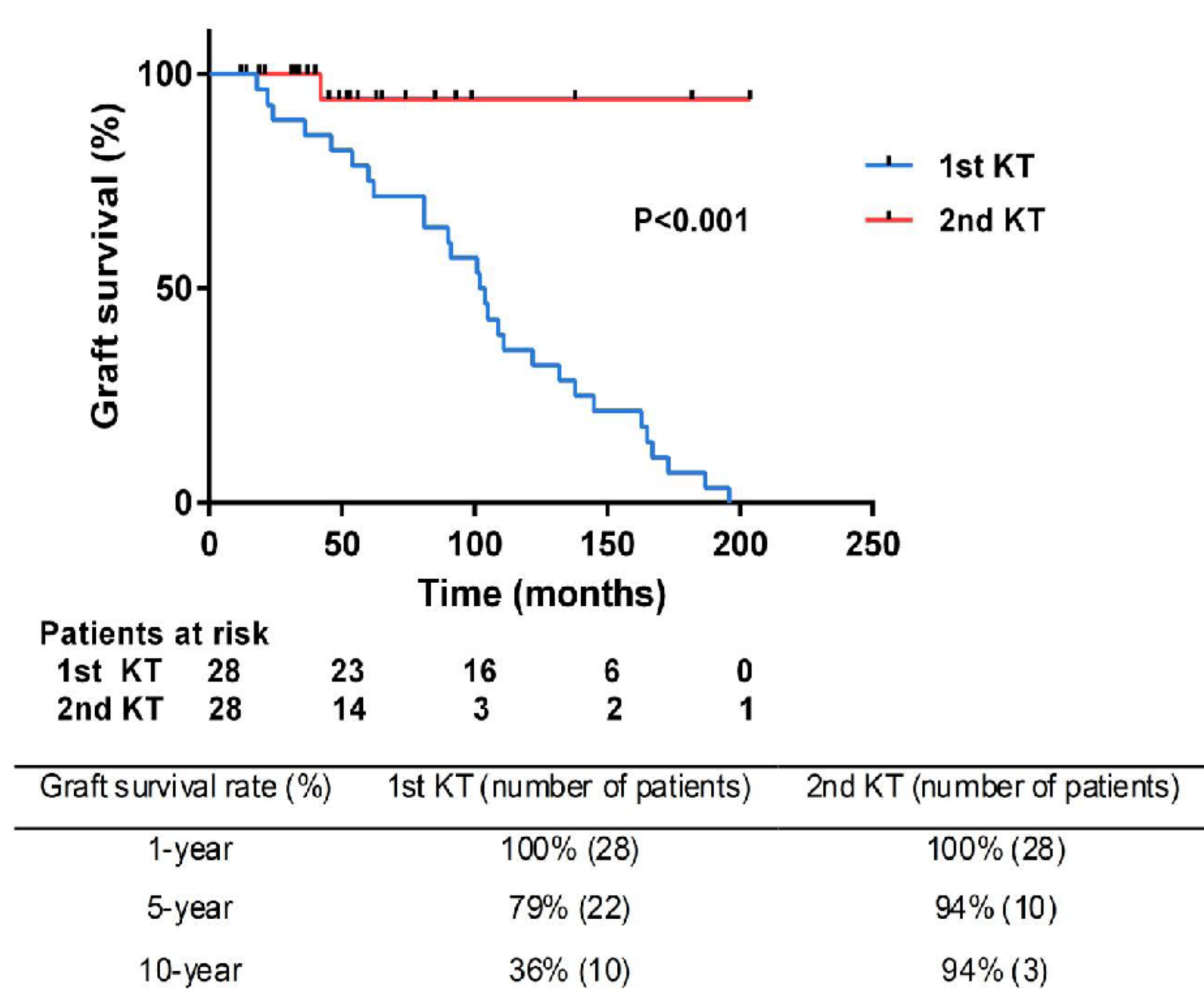
Methods

We reviewed all patients who received second transplantation because of graft loss associated with recurrent IgA nephropathy in four academic hospitals in Korea from March 1985 to December 2013. All patients were diagnosed with recurrent IgA nephropathy in the first graft biopsies. There were twenty eight patients, and we followed them until 1st October, 2014. We evaluated the outcomes of the second transplantation compared to the outcomes of the first transplantation in the same patients.

Results

Twenty one patients (75.0%) were male, and mean age of patients was understandably younger at the time of 1st transplantation than the time of 2nd transplantation (34.04 ± 9.80 vs. 46.89 ± 10.81, P < 0.001). Tacrolimus and mycophenolate mofetil were used more often in the 2nd transplantation. After second transplantation, 8 patients experienced rejection and IgA nephropathy recurred in 2 patients. However, only 1 patient lost her second graft due to chronic rejection during mean follow up time of 61.61 ± 47.23 months.

Figure 1. Graft survival of first and second transplants

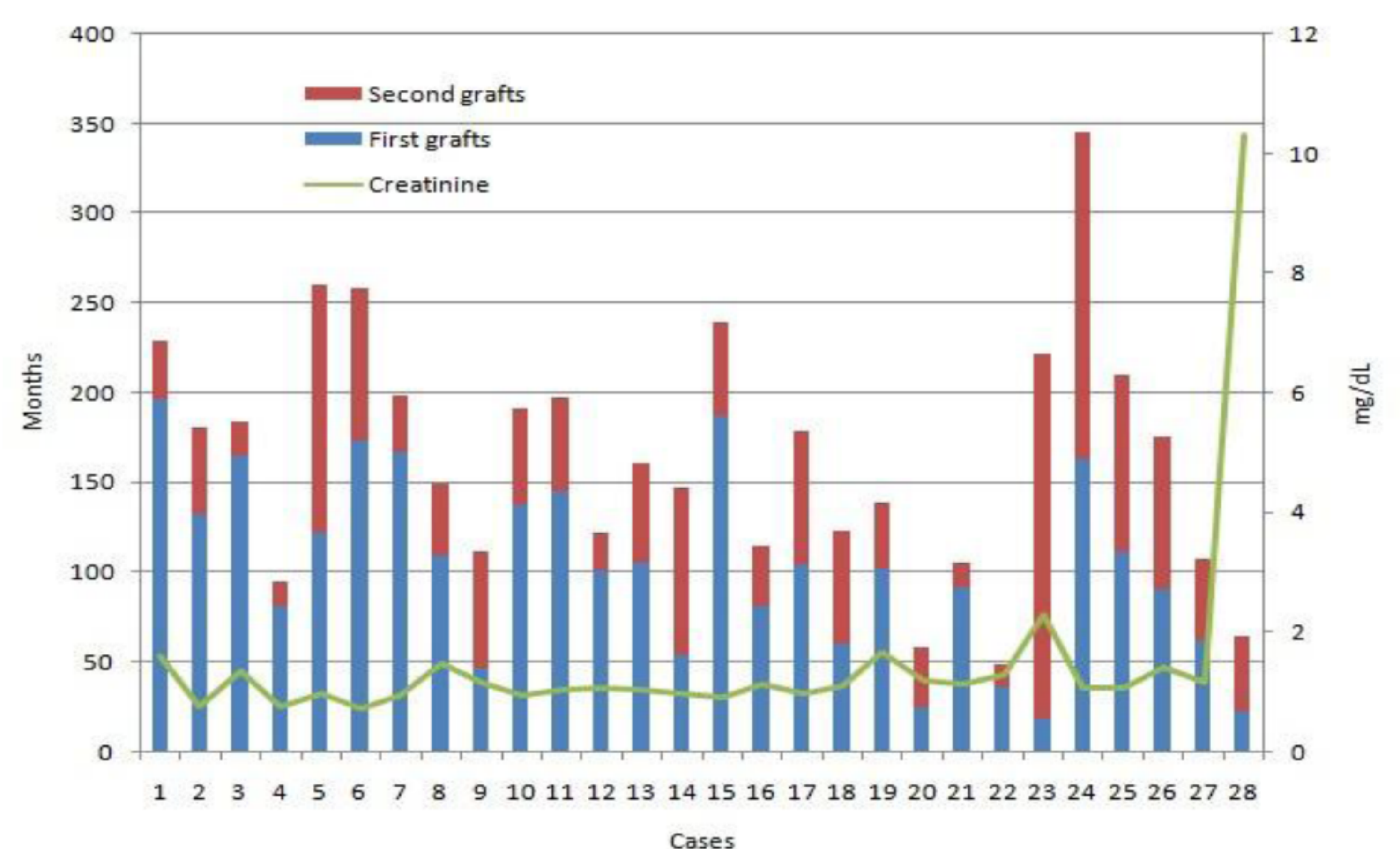


A mean serum creatinine level at the last follow up was 1.16 ± 0.33 mg/dL except the case of graft loss. First graft survival was 103.04 ± 51.43 months. Graft survival was better in the second transplantation (p<0.001 by Log-rank test) (Figure 1). We could not identify statistically significant risk factors.

Table 1. Baseline characteristics

	1 st KT	2 nd KT	P-value
Sex (Male/Female)	21 (75.0%)/ 7 (25.0%)	-	-
Age	34.04 ± 9.80	46.89 ± 10.81	0.000
Dialysis before transplantation	27 (96.4%)	24 (85.7%)	0.352
Hemodialysis	22 (81.5%)	21 (87.5%)	0.707
Peritoneal dialysis	5 (18.5%)	3 (12.5%)	
Duration of dialysis (months)	13.41 ± 13.15	42.96 ± 50.34	0.010
Donor type			0.124
Living donor	22 (84.6%)	18 (64.3%)	
Deceased donor	4 (15.4%)	10 (35.7%)	
ABO incompatible KT	0 (0%)	3 (10.7%)	0.236
HLA sensitized KT	0 (0%)	1 (3.6%)	1.000
Immunosuppressants			
Rituximab	0 (0%)	3 (10.7%)	0.237
Tacrolimus	6 (21.4%)	21 (75.0%)	0.000
Cyclosporine	22 (78.6%)	7 (25.0%)	0.000
Mycophenolate mofetil	4 (14.3%)	24 (85.7%)	0.000
Azathioprine	12 (42.9%)	2 (7.1%)	0.004
0-3 HLA mismatch	20 (74.1%)	19 (67.9%)	0.768

Figure 2. Cumulative graft survival and serum creatinine levels at last visit. Case number 11 and 23 were the cases of recurrent IgA nephropathy after second transplantation, and case number 28 was the case of graft loss.



Conclusion

In conclusion, the second transplantation in recurrent IgA nephropathy showed good long-term results compared to the first transplantation. Therefore, second transplantation could be an option for patients who experienced first graft loss due to recurrent IgA nephropathy.