

INTRODUCTION AND OBJECTIVES

Pediatric renal transplantation differs from adults in several aspects, such as immune response, pharmacological metabolism, and surgical specificities. This work aims to review the experience of our service in pediatric renal transplantation and to compare the results with the adult population.

MATERIALS AND METHODS

Between January 1981 and May 2017, 3008 kidney transplants were performed in our hospital, of which 101 were performed at pediatric (<18 years) recipients. In this work, we performed a retrospective evaluation of overall survival rates and allograft survival as well as risk factors for renal graft loss. Factors such as ischemia time, donor age, human leukocyte antigen (HLA) type, and PRA (Panel Reactive Antibody) and serum creatinine values were analyzed.

CONCLUSION

Despite the differences found between the two populations, the graft survivals in both groups are favorable and statistically similar. Pediatric renal transplantation thus represents a renal replacement option with good results.

RESULTS

Table 1. Comparison of demographics and clinical features between pediatric and adult renal transplant recipients

Variable	Pediatric recipients	Adult recipients	Sig
Number of patients (%)	101 (3.4)	2851 (96.6)	
Age of recipients (years, mean±SD)	13±3	43±17	**
Gender (%)			
Male	59 (58.4)	1925 (67.5)	†
Female	42 (41.6)	926 (32.5)	
Donor (%)			
Living	12 (11.9)	101 (3.5)	**
Deceased	89 (88.1)	2750 (96.5)	
Donor age (years, mean±SD)	26±12	43±17	**
Preemptive transplant (%)	8 (7.9)	9 (0.4)	
Duration of dialysis (months, mean±SD)	18±21	48±39	**
Cold-ischemia time (hours, mean±SD)	17.3±7.2	18.6±6.5	†
Surgery duration (hours, mean±SD)	2.6±0.5	2.5±0.7	†
Posttransplant malignancies (incidence)	1 (1.0)	159 (5.6)	
Acute rejections incidence	42.6	18.8	**
PRA value (mean±SD)	3±9	7±16	*
CKD cause (%)			
Glomerular	26 (25.7)	647 (22.7)	
Tubulointerstitial	38 (37.6)	441 (15.5)	
Congenital polycystic	4 (4.0)	241 (8.5)	**
Systemic/metabolic disease	11 (10.9)	560 (19.6)	
Idiopathic	22 (21.8)	962 (33.7)	
Graft survival at 5 yrs (%)	77.4	78.9	†
Overall survival at 5 yrs (%)	96.8	88.8	**

Legend: † - p>0,05; * p<0,05; **p<0,001

Table 2. Causes of death in pediatric renal transplant recipients (%)

Malignancy	1 (8.3)
Infections	2 (16.7)
Cardiovascular	4 (33.3)
Unknown	3 (25.0)
Others	2 (16.7)

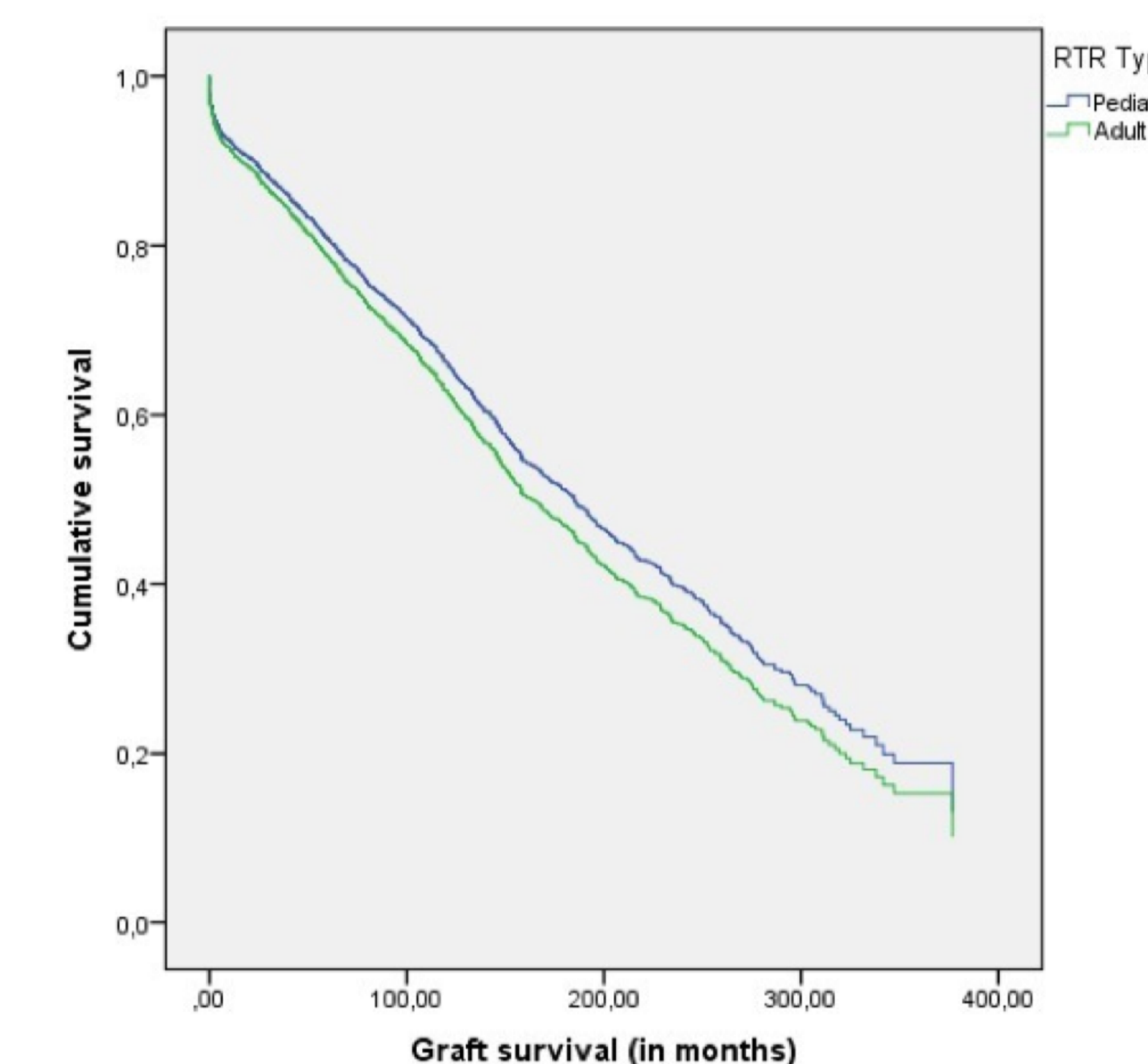


Figure 1 – Allograft survival of pediatric and adult population of RTRs

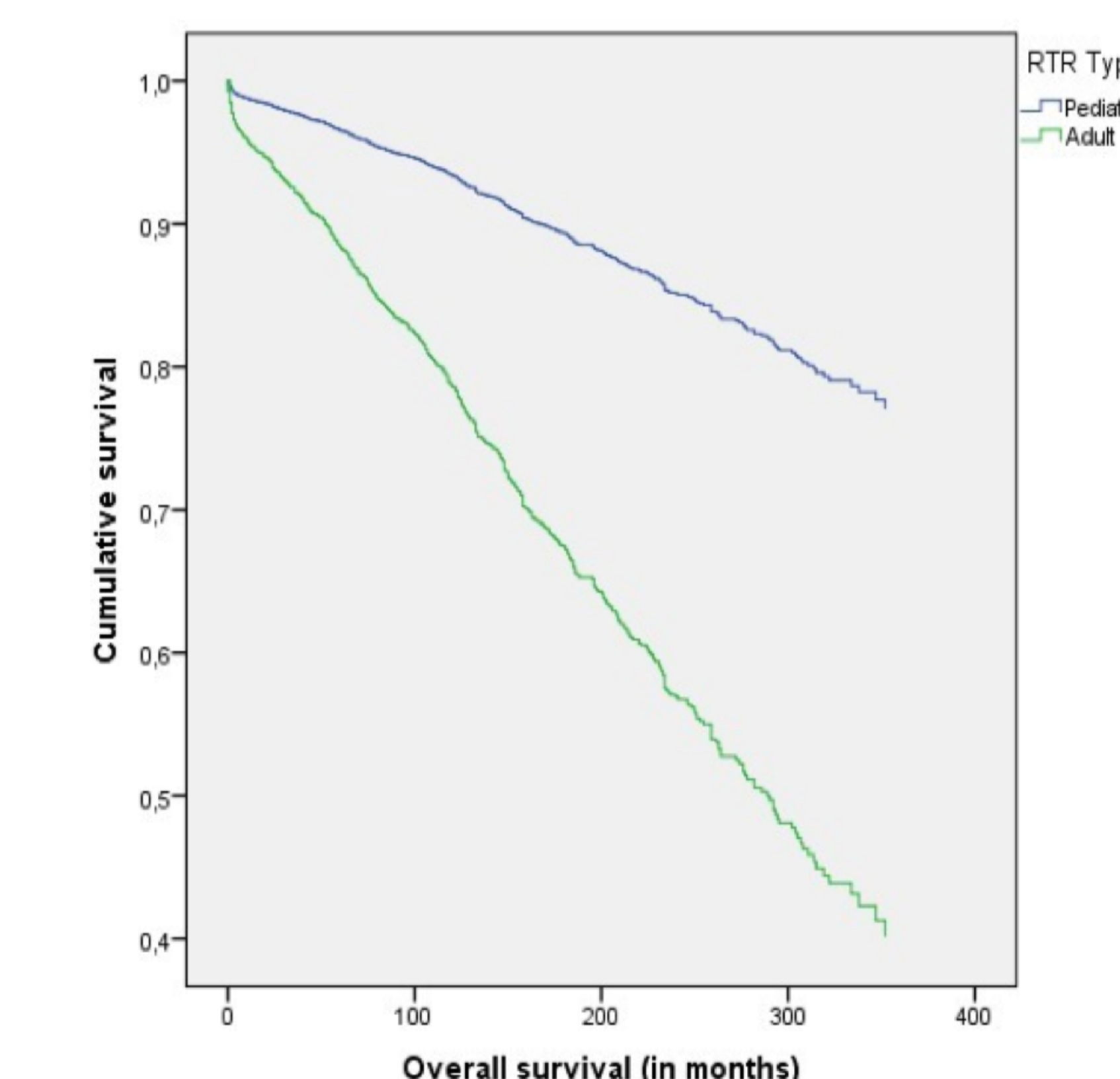


Figure 2 – Overall survival of pediatric and adult population of RTRs