

# CLINICAL OUTCOMES OF PEDIATRIC RENAL TRANSPLANTATION



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## INTRODUCTION

- ESRD in children in India: exact figures are unknown.
- Hemodialysis, peritoneal dialysis, and kidney transplant are treatment options.
- Very few centers perform renal transplantation in small children.
- The study analyzed rejection rates, survival, and clinical profiles of children who underwent kidney transplantation.

## AIM

- To study the clinical outcomes of pediatric transplants done at Aster Medcity in Kochi, India from December 2015 to August 2024.

## MATERIALS & METHODS

- Analyzed data of kidney transplant recipients who were below 18 years at the time of transplantation
- The donor characteristics such as recipient's age, weight at transplantation, native renal disease, mode and duration of prior dialysis therapy, surgical technique of transplantation, immunosuppression protocol, pre-operative, intra-operative, and post-operative medical, surgical complications, and the outcome(s) were assessed.

## RESULTS

- Number of transplant recipients: 46 (59% males)
- Mean follow-up duration : 55 months (range: 2–104)
- Donor- Mothers (66%), Fathers (13%), Grand mothers (10%), Grand fathers(7%), brothers and deceased donor 2% each
- Hemodialysis :31, Peritoneal dialysis:13, Preemptive transplant :2

## CONCLUSION

Renal transplantation in children has excellent outcomes, with 98% patient survival and 86% graft survival at 104 months. It is the preferred treatment for end stage renal disease in children

Fig 1: weight at transplant

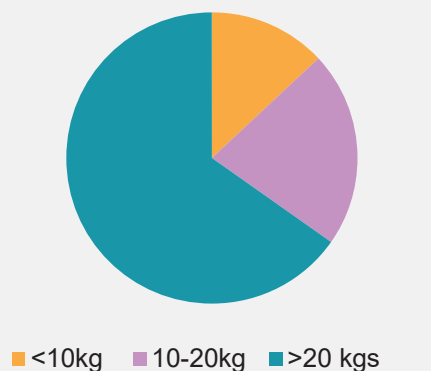
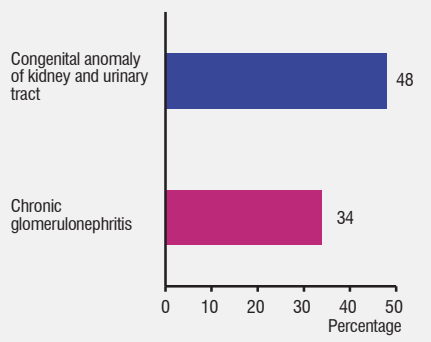


Fig 3: Native kidney diseases



- 24 patients (52%) received induction therapy using IL-2 blockers. Seven were treated with anti-thymocyte globulin. Fifteen (33%) did not receive any induction.
- Triple immunosuppressive regimen, (Tacrolimus, Mycophenolate, and Prednisolone).
- Acute graft rejection-15 ( 32 %) over 104 months;9 patients (60%) showed a complete response to treatment.
- Five patients had urinary tract infections.
- Forty patients (86%) had a functioning graft at 9 years post-transplant
- Graft survival rates: 94% at 1 year and 3 years, and 86% at 5 years post-transplantation

Fig 2: Age of recipients

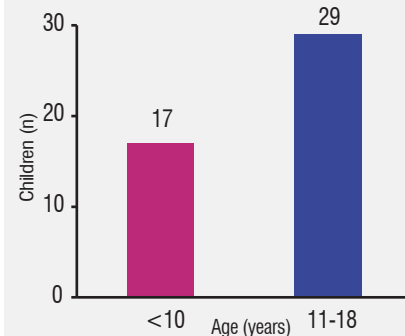
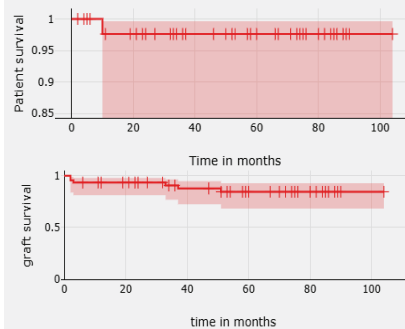


Fig 4: Patient and graft survival



- Six patients had graft loss during the follow-up period and are back on dialysis.
- Causes of graft loss included non-compliance with medication in two adolescent patients and chronic antibody-mediated rejection in another two patients.
- Patient survival rates- 98% at 1, 3 and 5 years post-transplant, indicating a very high overall survival rate for the pediatric transplant recipients in the study
- At the end of 104 months: 86% graft and 98% patientsurvival