



# POST-RENAL TRANSPLANT COMPLICATIONS IN HOSPITAL KUALA LUMPUR (HKL) FROM 2017-2021

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## INTRODUCTION

Renal transplant is the best treatment choice for End stage kidney disease (ESKD) patients as it improved patient's quality of life and mortality risk as compared to dialysis. Post-renal transplant complications are crucial experiences for every center to refine and improve their patient's care.

## OBJECTIVES

To review risk factors, surgical and non-surgical complications of renal transplant patients and their outcomes in HKL.

## METHODS

Retrospective descriptive study that included all renal transplant patients from 2017-2021 in HKL.

## RESULTS

A total of 229 patients were included. Among those renal transplant patients 131(57.2%) were male, 155 (67.7%) were Malay with the mean age of 33.4 years old (9-60). Prior to renal transplant, the unknown primary disease were 103 (45.2%), 153 (66.8%) were on hemodialysis with the median dialysis vintage of 3 years (1-8).

Renal transplants that were done were 180 (78.6%) living donor and 49 (21.4%) deceased donor, ABO-compatible renal transplant were 196 (87.1%) with the median cold ischemic time being 1.87 hours (1.17-3.50). Post-operatively, immediate graft function were 188 (82.8%). One hundred and ninety five (90.3%) were given Basiliximab as induction agents. Maintenance agents that were given are Tacrolimus (225, 100%), Mycophenolate mofetil (161, 72.5%), Mycophenolate sodium (36, 16.2%), MTOR kinase inhibitor (30, 13.3%) and low dose Prednisolone.

Complications post-renal transplant were surgical (70, 32%) and non-surgical (65, 28.9%).

Outcomes for our renal transplant patients were alive (221, 97.8%) with a functioning renal graft (213, 94.7%). There was no significant association between types of renal transplant with surgical complications (P= 0.16) and non-surgical complications (P= 0.96).

## CONCLUSION

Surgical and non-surgical complications in HKL were comparable with other renal transplant centers. Patients' and renal grafts survival were favourable, being 97.8% and 94.7%.

## REFERENCES

1. Levine, Max A et al. "Complications in the 90-day postoperative period following kidney transplant and the relationship of the Charlson Comorbidity Index." *Canadian Urological Association journal = Journal de l'Association des urologues du Canada* vol. 11,12 (2017): 388-393. doi:10.5489/cuaj.4378.
2. Reyna-Sepúlveda, F et al. "Outcomes and Surgical Complications in Kidney Transplantation." *International journal of organ transplantation medicine* vol. 8,2 (2017): 78-84.

**TABLE 1**

CHARACTERISTICS	DESCRIPTIVE STATISTICS
<b>Age (years)</b>	Mean (SD), range 33.4 (10.8), 9-60
<b>Gender</b>	
Male	131 (57.2%)
Female	98 (42.8%)
<b>Race</b>	
Malay	155 (67.7%)
Chinese	46 (20.1%)
Indian	18 (7.9%)
Others	10 (4.4%)
<b>Primary disease</b>	
Unknown	103 (45.2%)
Glomerulonephritis (GN)	71 (31.1%)
Hypertension (HTN)	14 (6.1%)
Others	40 (17.5%)
<b>KRT mode before transplant</b>	
Hemodialysis (HD)	153 (66.8%)
Peritoneal Dialysis (PD)	42 (18.3%)
Others	6 (2.6%)
HD&PD	26 (11.4%)
<b>Dialysis vintage (years)</b>	Median (IQR), range 3 (7), 1-8
<b>Types of transplant</b>	
Living donor	180 (78.6%)
Deceased donor	49 (21.4%)
<b>ABO compatibility</b>	
ABO compatible (ABOc)	196 (87.1%)
ABO incompatible (ABOi)	29 (12.9%)
<b>Cold ischemic time (hours)</b>	Median (IQR), range 1.87 (2.33) 1.17-3.50
<b>Graft function</b>	
Immediate	188 (82.8%)
Delayed	34 (15%)
Non-functioning	5 (2.2%)
<b>Induction agents</b>	
Basiliximab	195 (90.3%)
Thymoglobulin	21 (9.7%)
<b>Calcineurin Inhibitor (CNI)</b>	
Tacrolimus (FK)	225 (100%)
Cyclosporin (CSA)	0 (0%)
<b>Mycophenolate mofetil (MMF)</b>	161 (72.5%)
Mycophenolate sodium (MPS)	36 (16.2%)
Not on both	25 (11.3%)
<b>On MTOR</b>	
Yes	30 (13.3%)
No	195 (86.7%)

**TABLE 2**

COMPLICATIONS POST RENAL TRANSPLANT	
<b>Surgical complications</b>	
Yes	70 (32%)
No	149 (68%)
<b>Non-surgical complications</b>	
Yes	65 (28.9%)
No	160 (71.1%)

**TABLE 3**

OUTCOMES POST RENAL TRANSPLANT	
<b>Patient's status</b>	
Alive	221 (97.8%)
Death	5 (2.2%)
<b>Graft status</b>	
Functioning	213 (94.7%)
Failed	12 (5.3%)

