Challenges and Opportunities: Early Outcomes of Elderly Renal Transplant Recipients

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Disclosures

- No relevant conflicts of interest to disclose.

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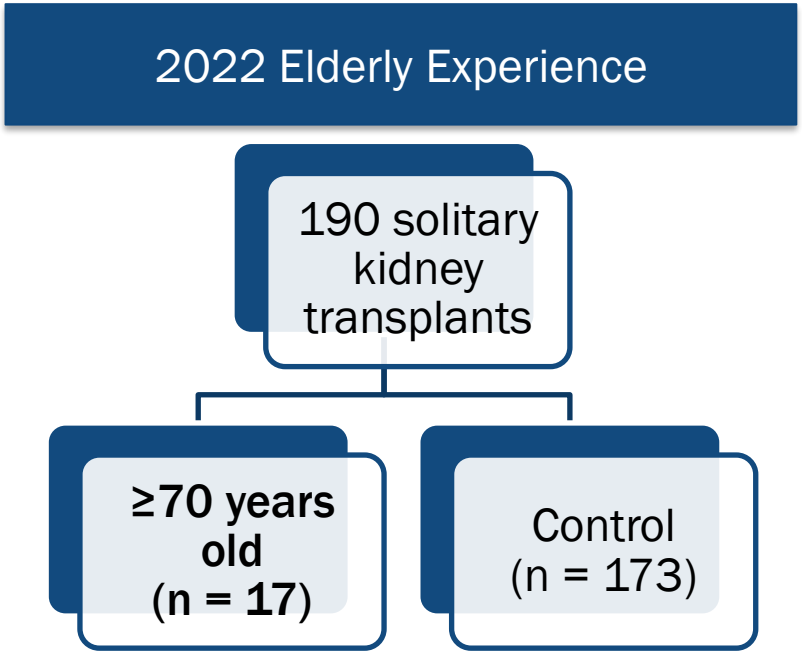
Background

- Elderly patients are the fastest growing population awaiting kidney transplant.

- They experience lower rates of acute rejection with higher rates of infectious complications.



Baseline Characteristics

	Elderly (n=17)	Control (n=173)	Overall (n=190)	P-value
Age at transplant (years), median (IQR)	72.4 (71.0,72.8)	51.7 (43.0,60.7)	54.3 (43.5, 62.9)	**<0.01**
Male, n (%)	11 (64.7)	102 (59.0)	113 (59.5)	0.65
BMI at transplant, median (IQR)	26.5 (25.1-29.9)	29.8 (24.5-32.8)	29.1 (24.732.8)	0.45
Pre-transplant dialysis type, n (%)				
HD	2 (11.8)	28 (16.2)	30 (15.8)	0.63
PD	6 (35.3)	35 (20.2)	41 (21.6)	0.15
Pre-emptive	2 (6.7)	28 (16.2)	30 (15.8)	0.63
Pre-transplant dialysis duration (years), median (IQR)	3.0 (1.5 – 7.0)	3.0 (2.0 – 6.0)	3.0 (2.0 – 6.0)	0.87
Prior solid organ transplant, n (%)	2 (11.8)	29 (16.8)	31 (16.3)	0.60
cPRA, median (IQR)				
at transplant	3.0 (0.0 – 29.0)	7.0 (0.0 – 57.0)	7.0 (0.0 – 57.0)	0.37
peak	28.0 (8.0 – 55.0)	37.0 (2.0 – 77.0)	37.0 (3.0 – 74.0)	0.53
UNOS	22.0 (3.0 – 33.0)	17.0 90.0 – 91.0)	18.5 (0.0 – 89.0)	0.76
cPRA ≥ 20%, n (%)	10 (58.8)	103 (59.5)	113 (59.5)	0.95
Deceased donor, n (%)	8 (47.1)	80 (46.2)	88 (46.3)	0.95
HLA (-A/B/DR) mismatches, median (IQR)	4.0 (3.0 – 5.0)	4.0 (3.0 – 5.0)	4.0 (3.0 – 5.0)	0.96
Induction, n (%)				
Basiliximab	8 (47.1)	55 (31.8)	63 (33.2)	0.20
rATG	9 (52.9)	118 (68.2)	127 (66.8)	0.20
CMV Risk status, n (%)				
High (D+/R-)	2 (11.7)	26 (15.0)	28 (14.7)	0.72
Moderate (R+)	14 (82.4)	130 (75.1)	144 (75.8)	0.51
Low (D-/R-)	1 (5.9)	17 (9.8)	18 (9.5)	0.60
Delayed graft function, n (%)	4 (23.5)	29 (16.8)	33 (17.4)	0.48

BMI: body mass index; CNI: calcineurin inhibitor; D: donor; DM: diabetes mellitus; ESKD: end stage kidney disease; FSGS: focal segmental glomerular sclerosis; GN: glomerulonephritis; HD: hemodialysis; HLA: human leukocyte antigens; HTN: hypertension; IQR: interquartile range; PD: peritoneal dialysis; PRA: panel reactive antibodies; rATG: rabbit anti-thymocyte globulin; R: recipient; SLE: system lupus erythematosus

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Outcomes

	≥70	Control	Overall	P-value
Serum creatinine (mg/dL), median (IQR)				
2 weeks	1.7 (1.4 – 2.8)	1.5 (1.2 – 2.0)	1.6 (1.3 – 2.0)	0.08
1 month	1.8 (1.2 – 2.8)	1.4 (1.2 – 1.7)	1.4 (1.2 – 1.7)	0.07
2 months	1.3 (1.1 – 1.8)	1.3 (1.2 – 1.6)	1.3 (1.2 – 1.6)	0.94
3 months	1.3 (1.1 – 1.8)	1.3 (1.1 – 1.6)	1.3 (1.1 – 1.6)	0.98
6 months	1.4 (1.1 – 1.6)	1.4 (1.1 – 1.6)	1.4 (1.1 – 1.6)	0.38
12 months	1.1 (1.1 – 1.7)	1.3 (1.1 – 1.6)	1.3 (1.1 – 1.6)	0.50
Hemoglobin (g/dL), median (IQR)				
2 weeks	9.5 (8.5 – 11.0)	9.9 (8.7 – 11.0)	9.8 (8.7 – 11.0)	0.40
1 month	10.0 (8.4 – 10.9)	10.8 (9.6 – 11.8)	10.7 (9.5 – 11.7)	0.07
2 months	10.0 (9.3 – 12.1)	11.4 (10.3 – 12.4)	11.4 (10.0 – 12.4)	**0.04**
3 months	10.7 (9.3 – 12.0)	11.8 (10.7 – 13.1)	11.8 (10.6 – 13.1)	**0.04**
6 months	11.5 (10.0 – 12.8)	12.4 (11.4 – 13.6)	12.4 (11.3 – 13.6)	**0.046**
12 months	11.8 (10.4 – 13.7)	13.2 (11.6 – 14.2)	13.1 (11.6 – 14.2)	0.09
FK 506 trough level (ng/mL), median IQR				
2 weeks	7.3 (6.4 – 12.3)	8.6 (6.0 – 11.1)	8.5 (6.1 – 11.1)	0.64
1 month	8.8 (7.8 – 11.4)	8.5 (6.5 – 10.7)	8.6 (6.6 – 10.8)	0.40
2 months	7.6 (6.7 – 9.9)	8.4 (6.7 – 10.1)	8.3 (6.7 – 10.0	0.06
3 months	8.2 (7.3 – 9.8)	8.3 (6.8 – 10.4)	8.3 (6.8 – 10.3)	0.86
6 months	7.8 (6.4 – 8.6)	7.6 (6.1 – 9.2)	7.6 (6.1 – 9.1)	0.81
12 months	6.8 (6.0 – 8.0)	7.0 (6.0 – 8.6)	7.0 (6.0 – 8.6)	0.45

FK 506: tacrolimus

No significant difference in BK, CMV, BPAR, or patient survival at one-year post-transplant

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Elderly Cohort at 1-year Post-Transplant

One patient excluded due to early disease recurrence (PNH) and transplant nephrectomy.

16 remaining patients accounted for 12 ED visits and 31 hospitalizations:

- UTI (48%)
- AKI (10%)
- Respiratory Tract Infection (16%)
- Wound complication (7%)
- Other (19%)

Conclusions

- We observed similar one year graft function.
- The elderly cohort had a significant utilization of higher-level care during the first year post transplant, predominantly due to infection.
- Further investigation to reduce immunosuppression in this cohort may be warranted.

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