



Comparative outcomes of simultaneous versus staged nephrectomy in polycystic kidney disease patients undergoing kidney transplantation

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PURPOSE

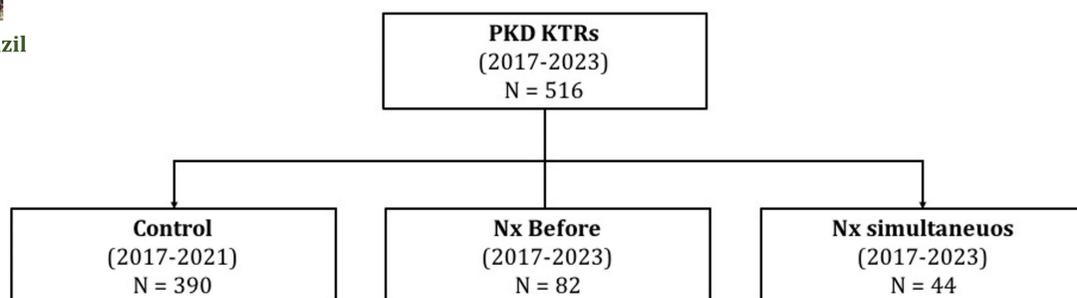
The study evaluated early outcomes in PKD patients with limited space for a transplant undergoing simultaneous native nephrectomy and transplantation, compared with a staged nephrectomy approach.

METHODS



This is a retrospective cohort study enrolled 516 PKD patients who underwent kidney transplants between 2017 and 2023.

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The patients were categorized into three groups based on their native nephrectomy status: pre-transplant nephrectomy (staged group, n=82), simultaneous nephrectomy and transplant (simultaneous group, n=44), and patients for whom the nephrectomy was not required (control group, n=390).



Outcomes: Death and graft loss within 3 months post-transplantation.

RESULTS

Demographics (control x before x simultaneous)

- Recipient age: 53 vs. 47 vs. 52.5 years; p<0.001
- BMI: 25.5 vs. 23.0 vs. 24.3 kg/m²; p<0.001
- Previous blood transfusion: 28.4 vs. 48.8 vs. 27.3 %; p = 0.001
- Kidney from deceased donors: 83 vs. 68.3 vs. 86.4 %; p = 0.005
- Time on surgery: 115 vs. 117 vs. 180 min; p<0.001
- Cold ischemia time: 21.2 vs. 20.1 vs. 22.9 hours; p = 0.18

Events after Transplantation (control x before x simultaneous)

- 48-h AVA requirement: 12.3 vs. 14.6 vs. 38.6 %; p<0.001
- ICU requirement: 6.9 vs. 4.9 vs. 54.5 %; p<0.001
- Length time on ICU: 4.5 vs. 3 vs. 4.0 days; p = 0.26
- Delayed Graft Function (DGF): 64.8 vs. 58.9 vs. 73.7 %; p = 0.34
- Length time on DGF: 3 vs. 3 vs. 4 days; p = 0.85

Three-month Graft Loss and Death

Event	Control n = 390	Before n = 82	Simultaneous n = 44	p-value
Graft loss, %	14 (3.6)	5 (6.3)	2 (4.7)*	0.53
Death, %	16 (4.1)	2 (2.4)	2 (4.5)	0.75

* 2 GL due to thrombosis (20/05/2019 e 01/03/2021)

CONCLUSION

Early outcomes for PKD patients undergoing simultaneous native nephrectomy and transplantation are comparable to those in staged nephrectomy and control groups, suggesting this approach is a viable alternative for patients with limited transplant space.