

M2: The Kidney Transplantation in Older People (KTOP) Study: Impact of frailty on outcomes

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Introduction: Older people with end stage kidney disease (ESKD) are vulnerable to frailty. In older people with ESKD the quality of life (QoL) benefits afforded by kidney transplantation (KTx) may be a greater consideration than survival. Longitudinal QoL assessment on the waitlist (WL) through to post KTx, and variations by frailty are under reported in older people. Understanding these experiences is integral to shared decision making.

Methods: KTOP, a prospective, mixed methods, observational study, recruited KTx candidates aged ≥ 60 . Questionnaires assessed frailty (Edmonton Frail Scale) and QoL (Short-Form 12, symptom burden, depression, illness intrusion, treatment satisfaction) on the WL (12, 24 months) and following KTx (3,12 months). The study was powered for QoL differences. Mixed-effect and comparative analysis determined frailty variations.

Results: 210 patients were recruited, with 120 transplanted. At recruitment 63.4%(118) were not frail, 19.4%(36) vulnerable, and 17.2%(32) frail. Frailty status remained unchanged in most WL participants, whilst 22.2% became increasingly frail. After KTx an initial decline occurred followed by 49.2% maintaining their pre-KTx frailty status, 24.6% improving, and 26.2% worsening.

Poorer clinical outcomes in the vulnerable/frail WL and KTx participants were observed (table 1). WL QoL showed stable physical component scores (PCS) in not frail candidates, and declining scores in vulnerable/frail (figure 1). Post-KTx not frail PCS declined before recovering, whilst PCS stabilised in vulnerable/frail. WL mental component scores (MCS) improved in both groups. Post-KTx MCS declined then improved in not frail recipients and worsened in vulnerable/frail (figure 1). Symptom burden, depression, illness intrusion and treatment satisfaction also varied by frailty.

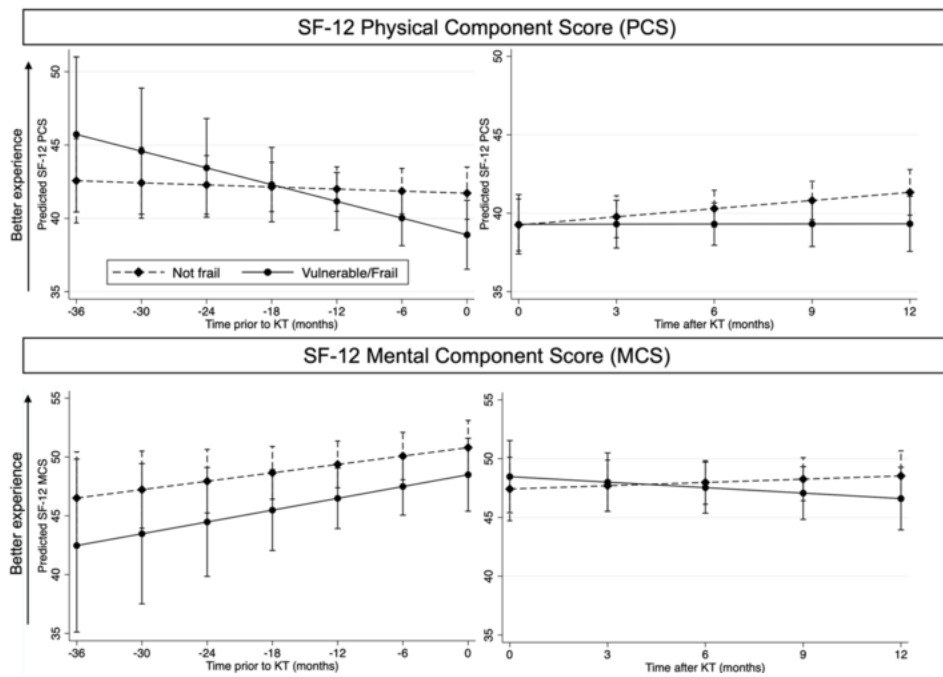
Discussion: Frail/vulnerable older people had worse clinical outcomes. KTx did not change QoL drastically for either group, and experiences varied by frailty. Assessing frailty is therefore crucial to older peoples' care, enabling tailored risk assessment, counselling, and targeted interventions.

Table 1. Waitlist and transplant outcomes by frailty status

Clinical Outcome	Not Frail	Vulnerable/Frail	p value
WL mortality	13 (23.2)	11 (33.3)	0.32
WL major infection episode	13 (23.6)	24 (72.7)	<0.001
WL single suspension episode	38 (61.3)	30 (83.3)	0.03
WL multiple suspension episodes	24 (38.7)	6 (16.7)	
WL total time suspended (days) (mean, \pm SD)	307 (244)	434 (295)	0.03
Transplanted	62 (53)	36 (52.2)	0.914
KTx mortality	7 (11.1)	4 (11.1)	1.0
Delayed graft function	12 (19.1)	14 (38.9)	0.03
All cause graft loss	11 (17.5)	4 (11.1)	0.06
Graft function at 12 months (ml/min/1.73m ²) (mean, \pm SD)	49.9 (18.8)	39.1 (17)	0.01
KTx major infection episode	34 (54)	26 (72.2)	0.07
Hospitalised in 1st year after KTx	38 (61.3)	23 (65.7)	0.67
Total LoS in 1st year after KTx (days) (mean, \pm SD)	30.6 (33.8)	25.3 (24)	0.51

Data presented as n (%) unless otherwise specified. LoS-length of stay.

Figure 1. Predicted quality of life changes on the waitlist and following kidney transplantation.



Category: Basic and translational science (as per category - all science)