Quality of life and treatment satisfaction in patients on renal replacement therapy for chronic kidney disease: Findings from the ATTOM programme

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Introduction

It is often presumed that transplantation leads to better health, quality of life (QoL) and treatment satisfaction compared with dialysis [1-3]. However the measures used typically focus on the impact on health status rather than QoL [4]. As part of the NIHR-funded Access to Transplantation and Transplant Outcome Measures (ATTOM) programme, preliminary analyses examined patients receiving differing treatments for chronic kidney disease and compared the impact of their treatment on their QoL and treatment satisfaction.

Methods

Measures completed at 3 and 12 months post-transplant / recruitment / transplant failure

- Average Weighted Impact (AWI) scores of the Renal-Dependent Quality of Life (RDQoL) questionnaire [5]
- Renal Treatment Satisfaction Questionnaire (status; RTSQs [6] & change version; RTSQc)
- AWI scores of the Audit of Diabetes-Dependent Quality of Life (ADDQoL) Questionnaire [7-8]
- Diabetes Treatment Satisfaction Questionnaire (status; DTSQs [9] & change; DTSQc [10]).

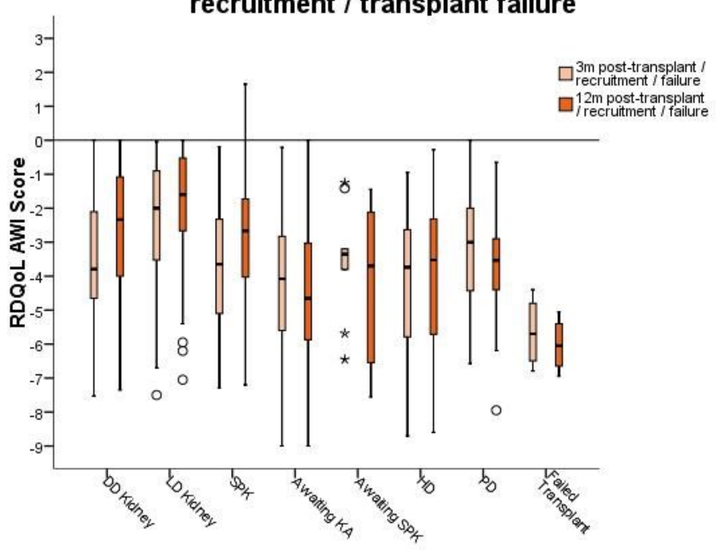
Analysis and presentation:

- ANOVA with planned contrasts.
- Box and whisker plots showing median, interquartile range and full range of scores. Circles indicate outliers in the data, with asterisks showing extreme outliers.

Table 1. No. of participants in preliminary analyses & % having positive (+ve), stable (within +/-0.50, "="), or negative change (-ve) in AWI RDQoL scores from 3-12m.

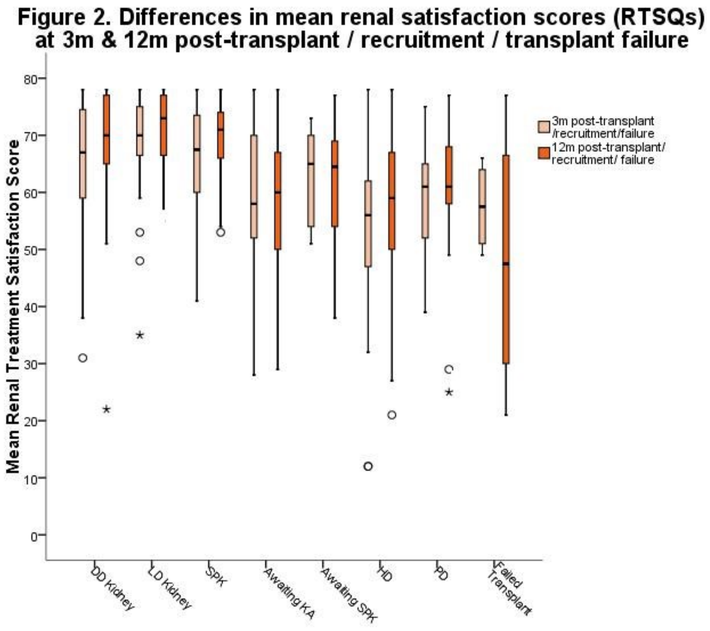
Participants	*n*	% +ve	% =	% -ve
Deceased donor (DD) kidney transplant recipients	64	60.9	25.0	14.1
Living donor (LD) kidney transplant recipients	57	52.7	33.3	14.0
Simultaneous pancreas-kidney (SPK) transplant recipients	47	48.9	31.9	19.2
Matched control patients awaiting a kidney alone (KA) transplant	60	26.7	41.6	31.7
Matched control patients awaiting an SPK transplant	9	11.1	55.6	33.3
Haemodialysis (HD)	53	39.6	20.8	39.6
Peritoneal dialysis (PD)	22	18.2	40.9	40.9
Patients receiving transplants which failed	4	50.0	-	50.0

Figure 1. Differences in the impact of renal condition on QoL (RDQoL AWI) scores at 3m & 12m post-transplant / recruitment / transplant failure



RDQoL AWI scores range from +3 to –9. 0 = no impact of renal condition on QoL. A negative score indicates negative impact of renal condition on QoL. A positive score indicates a positive impact of renal condition on QoL. All groups reported a negative mean/median score.

Figure 2. Differences in mean renal satisfaction scores (RTSQs) at 3m & 12m post-transplant / recruitment / transplant failure



RTSQs Treatment Satisfaction scores range from 0 to 78. All groups reported high mean/ median treatment satisfaction scores.

Results

Renal-related QoL (RDQoL) and treatment satisfaction (RTSQ) (see Figures 1 and 2, Table 1)

Successful transplant groups

- Preliminary analyses show similar or better AWI scores (mean negative impact of QoL) at 3m compared with other groups and similar or better treatment satisfaction.
- Improved AWI scores (i.e. reduced negative impact of renal condition on QoL) and improved treatment satisfaction from 3-12m post-transplant ($p < 0.0005$).
- Table 1 shows that fewer SPK recipients reported positive changes in RDQoL AWI scores (48.9%) from 3-12m than DD (60.9%) or LD recipients (52.7%).
- Greater increase in renal treatment satisfaction (RTSQc, not shown) compared with previous treatment in the successful transplant groups when compared with those on dialysis or awaiting KA ($p < 0.05$). The RTSQc overcomes the ceiling effects apparent in Figure 2 with the RTSQs.

Awaiting SPK and failed transplant groups

- Worsened AWI scores (i.e. negative impact of renal condition on QoL) and deterioration in treatment satisfaction from 3-12m.

Diabetes-related measures (ADDQoL and DTSQ) in SPK recipients (not shown in table or figures)

- Preliminary analyses show no change in ADDQoL AWI scores (i.e. mean negative impact of diabetes on QoL), or mean diabetes treatment satisfaction from 3-12m (as measured by the DTSQs).
- For SPK recipients a mean of +14.06 on the DTSQc scale from +18 (much more satisfied) to –18 (much less satisfied) indicates substantial improvement in treatment satisfaction. The DTSQc overcomes the ceiling effects apparent with the DTSQs.

Implications

As expected, successful transplant significantly reduced the substantial negative impact of chronic kidney disease on QoL. These preliminary analyses (n = 316) will be repeated on the full dataset (n = 650). Further analyses will investigate predictors of the between-group differences and predictors of improvements over time in treatment satisfaction and QoL.

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