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P229 -Is pre-renal transplant frailty and/or telomere length associated with length of stay and hospital readmissions post transplantation?

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Introduction: Both telomere length (TL) and frailty are associated with ageing. Telomere length is a biomarker of ageing that has been shown to play a role in post transplantation survival. Whilst frailty is a measure of physiological reserve and represents vulnerability that can lead to adverse health outcomes. Frailty is increasingly recognised as an important risk factor to prolonged hospital stay and early hospital re-admissions post transplantation. However, telomere length and frailty associations post renal transplantation (RT) and immediate outcomes are less well known. The aim of the study was to investigate if frailty and/or relative telomere length (rTL) are associated with immediate outcomes in the form of length of stay (LoS) and hospital readmissions after RT in our cohort.

Methods: This was a single centre prospective cohort study from October 2016 to April 2017. Frailty was measured as defined by Fried et al based on 5 components (low grip strength, slow walking speed, unintentional weight loss, low energy and low physical activity) at hospital admission for RT. Non-frail was defined as a score of 0 or 1; intermediate as a score of 2 and frail if the score was ≥ 3 . rTL was measured from peripheral blood mononuclear cells taken prior to the transplant using quantitative real-time polymerase chain reaction (rt-PCR). Data on co-morbidities, complications, and length of stay in hospital and readmissions within 3 months post-transplantation were recorded.

Results: 33 recipients (14 male, 19 female) were recruited prior to RT. Age ranged from 26-77 year with a median age of 48. Cadaveric transplantation was performed in 66.7% of patients and 33.3% had living donor transplant. 66.7% of patients were non-frail (68.2% cadaveric, 63.6% living donor); 24.2% were intermediately frail (18.2% cadaveric, 36.4% living donor) and 9.1% were frail (13.6% cadaveric) at the time of RT. The length of stay post RT ranged between 6 to 24 days with a mean length of stay of 9.2 days. There was no correlation between age, frailty index, grip strength and TL with length of stay. A higher Charlson co-morbidity index was strongly associated with longer length of stay post RT ($p=0.001$). No mortalities were reported in our cohort during the follow up period. There was no significant association between raised frailty scores and/or TL with increased hospital readmissions in the first 3 months post RT.

Conclusion: Despite a strong association between raised frailty index with increased hospital readmissions seen in other forms of transplantation, our study failed to confirm this hypothesis in our cohort of patients who underwent RT. There was no significant association between frailty index and rTL with length of hospital stay and outcomes 3 months post renal transplantation. However, a small sample size as well as shorter follow up period may be limiting factor in this study, affecting the results.