

Clinical frailty scoring in patients with end stage renal disease: A predictor of declining health?

Dr Lucy Hetherington¹, Dr Joanna Prentice¹, Dr Mark Findlay², Dr Tara Collidge²

¹Beatson West Of Scotland Cancer Centre, Glasgow, United Kingdom, ²Queen Elizabeth University Hospital, Glasgow, United Kingdom

Background

The incidence of frailty increases as GFR decreases. In the end stage renal disease (ESRD) population frailty is associated with early mortality, increased hospitalisations, and significant symptom burden. We examined the use of formal frailty scoring and its role in identifying deteriorating patients with advanced renal disease.

Methods

The Rockwood Clinical Frailty Scale (CFS) has high inter-rater reliability and correlates well with objective measures of frailty. We introduced routine recording of the CFS from January 2018 in the renal electronic record for patients on hospital haemodialysis therapy and those undergoing renal replacement therapy (RRT) planning. Based on CFS scoring patients were divided into 'frail' (CFS \geq 6) or 'robust' based (CFS $<$ 6) and patient demographics are described. The association of being 'frail' or a decline in score with mortality at seven months were described using adjusted logistic regression analyses.

Results

A total of 1663 scores were recorded in 800 patients. 57.3% of patients were male. The median age at entry date was 66 (IQR 55,75) years. The median CFS score was 4 (IQR 3,5). At follow-up 74 (9.3%) had died. The median score prior to death was 5.5. 182 (22.8%) were 'frail'. During the study period 469 patients had more than one score documented. Death at follow-up was more common in those who were 'frail', 20.9 vs 5.8%, $p<0.001$. Patients who were deceased at follow-up were more likely to have had a deterioration in frailty score, 51.9% vs 24.4%, $p=0.002$. Being 'frail' or having a deteriorating frailty score was associated with death at seven-month follow-up independent of age, sex or diabetic nephropathy status.

Conclusion

The presence of 'frailty' as measured by CFS, or deterioration in CFS is associated with death at follow-up, independent of age, sex or diabetic nephropathy. Routine monitoring of frailty using the CFS provides a simple method to identify patients who are deteriorating and at risk of death. High or deteriorating CFS score should trigger clinical review and anticipatory care planning where appropriate.