

A programme of supervised exercise and multidisciplinary education (PREHAB) prevents deterioration in physical function and nutritional status in persons approaching and commencing dialysis

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INTRODUCTION: Chronic kidney disease is characterised by several complications, leading to reduced functional ability, nutritional status and quality of life, particularly during transition to dialysis. We have previously reported results from the pre-dialysis intervention in a randomised trial comparing PREHAB, a patient-centred programme of exercise, nutrition and multidisciplinary education for patients approaching dialysis, with routine care. Here we report data following the pre-dialysis intervention and follow-up during the first 6 months of dialysis.

METHODS: Patients with eGFR \leq 12mls/min, who were able to exercise and anticipated to require dialysis within 6 months, were invited to participate. Physical function, nutritional status and quality of life were assessed at baseline using validated assessments. Participants were then randomised to the PREHAB intervention or routine care. The 10 week pre-dialysis intervention included a weekly 1 hour gym-based exercise circuit and a varied multidisciplinary education programme. The intervention was then continued on a monthly basis for the first 6 months of dialysis. Participants randomised to routine care received standard pre-dialysis and dialysis care. Physical function, nutritional status and quality of life were re-assessed in both groups after the pre-dialysis intervention (3 months), on commencing dialysis, and after the first 6 months of dialysis.

RESULTS: 27 patients (19 male, 8 female; mean age 66 years) participated. 13 patients were randomised to intervention and 14 to routine care. Age was similar in both groups, but a significantly higher proportion of females were allocated to the intervention group ($p=0.02$). The groups were well matched for nutritional status and quality of life at baseline, although physical function was significantly higher in the control group. Functional capacity and lower limb strength were improved, and upper limb strength and nutritional status maintained, after the pre-dialysis intervention. Trends towards improved quality of life were also observed. These changes persisted during the first 6 months of dialysis. There was an overall trend towards reduced physical function, particularly functional capacity and upper limb strength, as well as trends towards reduced nutritional status and quality of life in the control group throughout the study period (Table 1).

CONCLUSION: These results suggest the beneficial effects of a multi-component intervention in preventing deterioration in functional capacity, muscle strength and nutritional status in persons approaching dialysis. Benefits persisted during the first 6 months of dialysis. A larger, multi-centre study will evaluate the effectiveness of PREHAB on clinical and quality of life outcomes, and assess health-economic implications.