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# DIALYSIS. EPIDEMIOLOGY, OUTCOME RESEARCH, HEALTH SERVICES RESEARCH - 1

FP718 **FRAILTY AS AN INDEPENDENT PREDICTOR FOR HOSPITALIZATION-FREE SURVIVAL EVEN IN RELATIVELY HEALTHY PATIENTS RECEIVING CHRONIC DIALYSIS**

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**Introduction and Aims:** Frailty is a distinct clinical syndrome beyond just being old and ultimately results in increased risk for disability, hospitalization, and death. Interestingly, it has been reported that frailty is more common and appears even in early stage of chronic kidney disease (CKD) and much younger population of this group compared to the general population. We investigated the prevalence, correlates of frailty and the association of frailty with hospitalization-free survival among clinically stable patients undergoing maintenance hemodialysis (MHD) and chronic peritoneal dialysis (CPD).
**Methods:** Between July 2012 and December 2012, we recruited study subjects according to the inclusion criteria as follows: (1) age of 20 years or older, (2) at least 6 months or longer on dialysis, (3) no hospitalization for the last 3 months, except for vascular access problem in case of MHD patients, (4) ambulatory patients with or without assistive device, (5) cognitive enough to answer the questionnaires without help from others, and (6) gave informed consent without proxy and finally followed 1,658 patients ( MHD =1,255 and CPD = 403) until August 2014. We adopted frailty phenotype composed of the following components; 1) unintentional weight loss more than 4.5 Kg or 5% of the previous body weight for the last 1 year, 2) physical inactivity, 3) RAND-36 physical function (PF) scale <75 and vitality scale <55 as surrogates for weakness/slowness and exhaustion, respectively. Low PF scale was scored as 2 points and other components as 1 point for each. Those with 0, 1-2 and 3 or more points were considered as non-frail, pre-frail and frail, respectively. Demographic data were obtained by review of medical records. Blood chemistry data used were the values averaged over the three consecutive routine checkup.
**Results:** The 1,658 participants evaluated were 55.9 ±12.9 years of age (mean ± SD) on dialysis for 5.2±4.5 years; 55.7% were male and 39.4% were diabetes. Frail subjects were 577 (34.8 %) and 757 (45.7%) were pre-frail. Multivariate logistic regression analysis showed that female sex, unemployed status, older age, higher body mass index, lower education level, lower TIBC and comorbid conditions were independently associated with frailty. During the 86 weeks follow-up period, 608 patients were hospitalized. The proportion with hospitalizations was 24.4% for non-frail, 33.0% for pre-frail and 48.4% for frail (P< 0.001). On univariate analysis, pre-frail and frail patients were as 1.4 (95% confidence interval [CI] 1.07 to 1.78) and 2.4 (95% CI 1.86 to 3.07) times as more likely to be hospitalized, respectively. Frail phenotype remained significantly associated with hospitalization (adjusted hazard ratio 1.80; 95% CI 1.4 to 2.3) in multivariate Cox proportional hazards models.
**Conclusions:** Frailty phenotype was very common and significant predictor of hospitalization-free survival even in a relatively healthy patients receiving chronic dialysis. More studies are necessary for preventing or attenuating frailty in the chronic dialysis patients.