

Oral Communication Abstract

Presentation No. **OC8-03** (Abstract Submission No. 2189)

Oral Communications 8 Sep. 4 (Sat), 08:30-10:30

The Association Between Body Composition Parameters and Quality of Life in Peritoneal Dialysis Patients

Seon Mi Kim¹, Minjung Kang¹, Hyunjin Ryu¹, Eunjeong Kang², Yong Chul Kim¹, Seung Seok Han¹, Hajeong Lee¹, Dong Ki Kim¹, Kwon Wook Joo¹, Kook-Hwan Oh¹

¹Department of Internal Medicine-Nephrology, Seoul National University Hospital, Korea, Republic of

²Department of Internal Medicine-Nephrology, Ewha Womans University Medical Center, Korea, Republic of

Objectives: End stage kidney disease (ESKD) patients have poor health-related quality of life (HRQOL) compared to general population. Protein energy wasting and over-hydration, which are common in peritoneal dialysis (PD) patients, may affect changes in body composition. This study evaluated whether alterations in body fluid status or nutritional indices assessed by body composition monitor (BCM) may predict HRQOL from PD patients.

Methods: We performed a cross sectional study on the association between body composition and HRQOL in PD patients from Korean Cohort Study for Outcomes in Patients on Peritoneal Dialysis (KNOW-PD) in Seoul National University Hospital. Body composition was determined by bioimpedance spectroscopy. HRQOL was assessed by KDQOL-SF version 1.3 Questionnaire, which is summarized to three composite scores-kidney disease component summary score (KDCS), physical composite summary (PCS), mental composite summary (MCS). The relations between hydration status, lean tissue index (LTI), and fat tissue index (FTI) and HRQOL were analyzed by regression analysis.

Results: 196 PD patients were included in the present study. There was a significant difference in KDCS and PCS between groups determined by hydration status, but no difference in MCS. There was no significant difference in HRQOL between groups determined by LTI or FTI. KDCS, PCS, and MCS had a significant negative correlation with hydration status. PCS had a significant negative correlation with FTI. In subgroup analysis stratified with sex, dialysis vintage, residual renal function (RRF), co-morbidity score, and subjective global assessment (SGA), over hydration showed a negative relationship with HRQOL. FTI showed a negative relationship with HRQOL in male, PD duration > two years, lower RRF, higher co-morbidity and SGA.

Conclusions: Both hydration status and FTI were associated with HRQOL and increased hydration status negatively affected HRQOL in PD patients. Further longitudinal or intervention studies are needed to evaluate the impact on HRQOL of changes in body composition to ESKD patients.

Table. Regression coefficients of the body composition difference for HRQOL scores

Table. Regression coefficients of the body composition difference for HRQOL scores

Predictor Variable		Relative hydration		E/I		FTI		LTI	
		β	p	β	p	β	p	β	p
KDCS	Model1	-2.1	0.022	-122.0	0.072	-0.9	0.725	0.4	0.890
	Model2	-2.3	0.015	-135.5	0.051	-0.4	0.887	-3.5	0.356
	Model3	-1.7	0.077	-24.7	0.743	1.1	0.655	-4.1	0.278
PCS	Model1	-1.8	0.001	-141.3	<0.001	-3.5	0.015	0.7	0.723
	Model2	-1.8	0.001	-148.8	<0.001	-3.5	0.018	-0.1	0.973
	Model3	-0.9	0.135	-118.1	0.003	-2.4	0.092	-1.0	0.654
MCS	Model1	-1.3	0.033	-89.2	0.038	-1.6	0.32	-0.2	0.933
	Model2	-1.3	0.029	-95.6	0.030	-1.5	0.357	-1.4	0.574
	Model3	-0.4	0.514	-75.2	0.102	-0.6	0.701	-2.4	0.326

Model 1 : Unadjusted

Model 2 : Adjusted for age and sex

Model 3 : Adjusted for Model 1 plus dialysis vintage, SGA, residual urine, Davies score

Abbreviation: KDCS, kidney disease component summary score; PCS, physical composite summary; MCS, mental composite summary; E/I, extracellular water/intracellular water; FTI, fat tissue index; LTI, lean tissue index

Figure. Forest plot of regression coefficient (95% Confidence interval) for the association between component of body composition and health related quality of life.

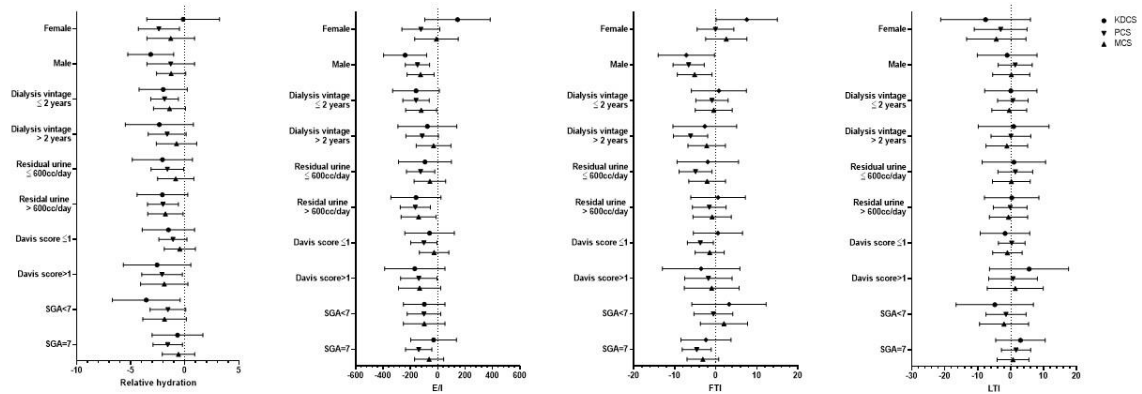


Figure. Forest plot of regression coefficient (95% Confidence interval) for the association between component of body composition and health related quality of life.

Abbreviation: KDCS, kidney disease component summary score; PCS, physical composite summary; MCS, mental composite summary