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Association factors with Gait speed in predialysis chronic kidney disease patients: Result from RECOVERY study

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Objectives: Gait speed is an important measure of functional ability. The aim of this study is to investigate the association factors for gait speed in CKD patients in terms of sarcopenic component, plasma uremic or inflammatory markers, and quality of life (QoL).

Methods: RolE of AST120 in sarCOpenia preVEntion in pRe-dialYsis chronic kidney disease patients (RECOVERY) is a 48-week, randomized controlled, parallel group, open-label, multicenter trial to find the role of AST-120 in CKD patients. Low gait speed was defined as less than 1.0 m/s and logistic regression analysis was performed to find the associated factors for gait speed.

Results:

Compared to group with gait speed ≥ 1.0 m/s, the group with gait speed < 1.0 m/s was older and had higher proportion of low education level and medical aid. Gait speed showed weak correlation with handgrip strength, however not with skeletal muscle index. The level of IL-6 was higher in gait speed < 1.0 m/s group (2.82 ± 1.88 vs 2.09 ± 1.60, P = 0.012). In multiple logistic regression analysis, higher level of IL-6 (OR 2.98, 95% CI 1.52-5.81, P = 0.001) and physical functioning in physical components and role limitation d/t emotional problem, social functioning in Mental components, overall health rating in kidney disease and Work status were significantly associated with GS.

Conclusions: Gait speed was associated with IL-6 among inflammatory markers and various component in QoL.