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Clinical Impact of Sleep and Walking Time on Mortality and Renal Outcomes in Elderly CKD Patients

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Objectives: Walking is an easy and safe exercise and is known to lower the risk of cardiovascular disease, depression, and dementia. In addition, short or long sleep duration could increase the risk of CKD progression and CVD. However, there is a lack of research targeting elderly CKD patients. Therefore, we aimed to evaluate the effects of sleep and walking time on mortality and renal outcomes in elderly CKD patients.

Methods: We used a prospective cohort of KSGN outpatients aged 70 years or older with CKD stage 3-5. We divided the patients into groups based on sleep duration of 7-8 hours and walking time of 30 minutes. Then, we investigated the association between death and renal replacement therapy (RRT) using multivariable logistic regression analysis.

Results : The elderly CKD group with sleep >9 hr and walk <30 min/d was significantly older, had lower serum albumin levels, and had higher rates of female sex, myocardial infarction, dementia, and history of fracture compared to other groups. Based on the sleep 7-8 hr and walk \geq 30 min/d group, the group with sleep >9 hr and walk <30 min/d had a significantly higher risk of death, but no statistical significance was observed with RRT.

Conclusions: In elderly CKD patients, those who sleep long and have little walking activity have a significantly higher risk of death, so it is also important to walk and maintain adequate sleep duration.