Kidney disease

DEPRESSION IS ASSOCIATED WITH NON-DIPPING BLOOD PRESSURE IN PATIENTS WITH CHRONIC KIDNEY DISEASE

Objectives Previous studies have shown that depressive symptoms are associated with poor cardiovascular outcomes in patients with chronic kidney disease (CKD). However, the association between depressive symptoms and 24-h blood pressure (BP) patterns in this population is unclear. In the current study, we aimed determine the association between the non-dipping status and depression in patients with CKD in a cross-sectional study.

Methods A total of 221 patients with CKD were recruited into this study. Sleep quality was measured by Pittsburgh Sleep Quality Index (PSQI), while depressive symptoms were assessed by Beck Depression Inventory-13 item (BDI-13). 24-h BP patterns were determined by 24-h ambulatory BP monitoring. eGFR were assessed by simplified MDRD equation.

Results A total of 93 (42.9%) and 128 (57.1%) patients were defined as dippers and non-dippers, respectively. Non-dippers had higher daytime mean systolic BP and diastolic BP (135.3±18.8 vs 128.1±16.7, p=0.002; 80.9±11.3 vs 77.9±10.7, p=0.046), higher nocturnal systolic BP and nocturnal diastolic BPs (135.3±20.1 vs 117.1±15.7, p=0.000; 80.9±12.3 vs 71.2±10.7, p=0.000). In univariate analyses, non-dippers had higher BDI scores (6.27±5.42 vs 4.41±4.10, p=0.007) and higher PSQI scores (9.89±4.87 vs 8.60±4.40, p=0.037), older age (41.76±15.38 years vs 35.71±13.12 years, p=0.001) than dippers. In addition, non-dippers had lower eGFR level than dippers (55.7±47.8 vs 77.8±47.1, p=0.001). Multiple logistic regression analyses showed non-dipping status was associated with high BDI scores (OR=1.07, 95% CI 1.03 to 1.12), eGFR (OR=0.98, 95% CI 0.96 to 0.99) and ambulatory systolic blood mean pressure (OR=1.12, 95% CI 1.03 to 1.42). In this model, there were no significant associations between non-dipping and age, sex, ambulatory diastolic blood mean pressure, PSQI score.

Conclusions Our study showed a high prevalence of non-dipping blood pressure in CKD patients. In view of the adverse effects of non-dipping on outcomes of patients with CKD, improvement of depressive symptoms might benefit this population.

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