



NON-INVASIVE SCREENING TEST FOR SARCOPENIA IS A USEFUL PREDICTOR OF FUTURE CARDIOVASCULAR EVENTS IN PATIENTS WITH CHRONIC KIDNEY DISEASE

Poster Contributions
Poster Hall, Hall A/B
Sunday, March 11, 2018, 3:45 p.m.-4:30 p.m.

Session Title: Risk Factor Assessment and Risk Prediction to Guide ASCVD Prevention
Abstract Category: 32. Prevention: Clinical
Presentation Number: 1260-419

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Background: Sarcopenia is frequently observed and associated with poor outcomes in patients with chronic kidney disease (CKD). A simple screening test for sarcopenia using age, grip strength, and calf circumference was recently developed. However, the clinical utility of this sarcopenia score in patients with CKD remains unclear.

Methods: We calculated sarcopenia score of 265 patients with CKD and followed the patients for cardiovascular events. CKD was defined as estimated glomerular filtration rate less than 60ml/min/1.73m² and/or the presence of proteinuria by semi-quantitative dipstick test. The endpoint of this study was a composite of total mortality and cardiovascular hospitalization.

Results: We divided all participants into high (n=166) and low (n=99) sarcopenia score groups using a simple scoring system. Patients in the high sarcopenia score group showed significantly higher plasma B-type natriuretic peptide (BNP) levels (median: 103.1 pg/mL, interquartile range: 46.3-310.0 pg/mL) than those in the low sarcopenia score group (median: 46.7 pg/mL, interquartile range: 18.0-91.8 pg/mL) (p<0.0001). The Kaplan-Meier curve revealed that the risk of adverse cardiovascular events was significantly greater in the high than low sarcopenia score group (log-rank test: p<0.0001), even after potential confounding factors were corrected using propensity score matching. Multivariate Cox hazard analysis identified a high sarcopenia score (hazard ratio: 3.00, 95% confidence interval: 1.44-6.27, p=0.0003) as an independent predictor of the primary endpoints. Furthermore, the combination of a high sarcopenia score and high BNP (>200pg/mL) level identified patients with a significantly higher probability of future events (p<0.0001).

Conclusion: This study demonstrates that this simple screening score for sarcopenia could be a useful tool for estimating the future adverse event risk in patients with CKD. This sarcopenia score is convenient and easy to check, and its calculation is useful as a means of risk stratification especially in the primary care setting.