

Gender-specific association of adiponectin with coronary artery calcification progression in CKD

전남대학교병원 신장내과

서상현

Background/Aims: Although low serum adiponectin level is a predictor of the coronary artery calcification progression in general population, the association has not been validated in patients with CKD.

Methods: A total of 1127 participants were divided into the quartiles by serum adiponectin level at the baseline, where the 4th quartile was defined as high. The association of high serum adiponectin level with coronary artery calcium (CAC) score change during 4-year follow-up and the risk of cardiovascular (CV) events were analyzed by multivariate linear regressions and Cox proportional hazard regressions, respectively.

Results: High serum adiponectin level was associated with the increase in CAC scores in male (Adjusted β coefficient 41.842, 95% CI (Confidence interval) 0.811 to 82.873, $P = 0.042$), but not in female (Adjusted β coefficient -9.004, 95% CI -3.073 to 15.064, $P = 0.463$) subjects. Although high serum adiponectin level was associated with increased risk of fatal and non-fatal CV events in male subjection before adjustment for CAC score-related variables (Hazard ratio (HR) 2.015, 95% CI 1.009 to 4.021, $P = 0.047$), the association was not significant after the adjustment (HR 1.839, 95% CI 0.909 to 3.678, $P = 0.090$). On the other hand, in the analysis of female subjects, the association was significant only after the adjustment for CAC score-related variables (HR 2.944, 95% CI 1.176 to 7.369, $P = 0.021$), but was not significant before the adjustment (HR 2.282, 95% CI 0.973 to 5.356, $P = 0.058$).

Conclusions: High serum adiponectin level is associated with the progression of coronary artery calcification in male, but not in female, patients with CKD. It should be cautious to interpret serum adiponectin level in patients with CKD, as our findings are contradictory to the previous ones from general population.

