The association of 2-microglobulin and fibroblast growth factor 23 with major adverse cardiac event in acute coronary syndrome patients with chronic kidney disease

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Abstrak

Background: chronic kidney disease (CKD) increases the severity and risk of mortality in acute coronary syndrome (ACS) patients. The role of 2-M as a filtration and inflammation marker and FGF23 as a CKD-MBD process marker might be significant in the pathophysiology in ACS with CKD patients. This study aims to determine the association of 2-M and FGF23 with major adverse cardiac event (MACE) in ACS patients with CKD. Methods: we used cross sectional and retrospective cohort analysis for MACE. We collected ACS patients with CKD consecutively from January until October 2018 at Dr. Cipto Mangunkusumo General Hospital. Data were analyzed using logistic regression and Cox's Proportional Hazard Regression. Results: a total of 117 patients were selected according to the study criteria. In bivariate analysis, 2-M, FGF23, and stage of CKD had significant association with MACE (p = 0.014, p = 0.026, p = 0.014, respectively). In multivariate analysis, 2-M - but not FGF 23- was significantly associated with MACE (adjusted HR 2.16; CI95% 1.15-4.05; p = 0.017). Conclusion: 2-M was significantly associated with MACE, while FGF23 was not so. This finding supports the role of inflammation in cardiovascular outcomes in ACS with CKD patient through acute on chronic effect.