

Association of Metabolic Syndrome and Renal Insufficiency with Clinical Outcome in Acute Myocardial Infarction

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Introduction: Metabolic syndrome (MetS) is an independent risk factor for chronic kidney and cardiovascular diseases. However, few studies have examined the combined effects of MetS and renal insufficiency after acute myocardial infarction (AMI). We examined the effect of MetS on clinical outcomes in patients with AMI in the presence or absence of renal insufficiency.

Methods: From November 2005 to September 2008, 11,462 patients with AMI were enrolled in the prospective Korean Acute Myocardial Infarction Registry. Participants were analyzed according to the presence or absence of MetS and renal insufficiency, defined by a low estimated glomerular filtration rate (eGFR). The primary endpoints were major adverse cardiac events (MACE), including a composite of all cause-of-death, myocardial infarction, target lesion revascularization, and coronary artery bypass graft during the 1-year follow-up period.

Results: The prevalence of MetS was higher in AMI patients with low eGFR. In-hospital death and composite MACE were significantly higher in patients with MetS than in those without MetS in the presence of renal insufficiency. Multivariate analysis showed that old age, multi-vessel involvement, high levels of inflammation, diabetes and MetS were associated with 1-year composite MACE in patients with renal insufficiency. After adjusting for multiple covariates, the 1-year mortality rate was higher in patients with both MetS and renal insufficiency than in those with MetS without renal insufficiency or in individuals without MetS.

Conclusions: MetS is associated with poor clinical outcomes and it increases the mortality in patients with AMI, especially in association with renal insufficiency.

Key Words: 급성 심근경색, 대사증후군, 신부전

AMI, Metabolic syndrome, Renal insufficiency