ABSTARACT

Prognostic Value of Adrenomedullin in Patients With left ventricular systolic dysfunction after an Acute Myocardial Infarction

Objectives This study sought to assess the prognostic impact of adrenomedullin ADM after an acute myocardial infarction (AMI).

Background Adrenomedullin (ADM) is elevated in heart failure (HF) and after AMI and compared it with N-terminal pro-B-type natriuretic peptide (NTproBNP), a marker of death and HF.

Methods We measured plasma ADM and NTproBNP in 60 consecutive post-ST elevated AMI patients with systolic dysfunction (< EF 50%), (45 men,represents 75% with mean age57.6±8.4 years old), 3 to 5 days after chest pain onset.

Results Mean age of studied patients was 57.6±8.4 years old (Range 35-80). Males constituted 73.3% of our study population (44 males), , we found mean NYHA 2.8 , mean Killip class of 2.9 and mean TIMI risk score of 8.3.

Follow-up was done at 90 days. Forty eight patients survived (80%). Two patients experienced cerebrovascular events (3.3%),two patients experienced re-infarction (3.3%), and seven patients experienced life-threatening arrhythmias (11.7%).

ADM had proved to have a significant prognostic value in predicting mortality if compared to Pro-BNP as evidenced by plotting the ROC curve that revealed AUC for ADM to be 0.977 and 0.775 for Pro-BNP . The same significant higher prognostic power for ADM applies for predicting MACE using ROC curve and estimating AUC. Multivariate analysis showed that ADM was the only predictor for MACE. ADM: (OR 1.62, CI 95%: 1.19-2.20, P value .002).

Conclusion The ADM system is activated after AMI. The ADM may represent a clinically useful marker of prognosis in patients with LV dysfunction after an acute AMI.

Key words: ADM (adrenomedullin)),AMI (acute myocardial infarction), AUC (area under the curve,MACE (major adverse cardiovascular events).