

Nt-Probnp in Assessment of Severity of Coronary Artery Disease in Patients with Non-ST Elevation Acute Coronary Syndrome

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OBJECTIVE

The aim of this study was to compare serum Nt-proBNP levels in NSTEMI-ACS patients and controls and to assess the relation between serum N-terminal pro brain natriuretic peptide (Nt-proBNP) and the severity of coronary artery disease (CAD) in patients with non-ST elevation acute coronary syndrome NSTEMI-ACS [unstable angina and NSTEMI].

METHODS AND RESULTS:

Sixty NSTEMI-ACS patients and twenty matched controls without significant obstructive coronary artery disease were included. Cardiac enzymes, blood urea, serum creatinine, serum Nt-proBNP were measured in all patients immediately before coronary angiography. Gensini score and Syntax score were calculated for all study patients. The NSTEMI-ACS patients were followed up for Six months major adverse cardiovascular events (MACE) including mortality, myocardial infarction, heart failure, stroke, revascularization by primary percutaneous coronary intervention or coronary artery bypass grafting.

The mean serum Nt proBNP in NSTEMI-ACS [unstable

angina and NSTEMI] patients was significantly higher (662.7 ± 635.2) pg/ml than that in the control (102.3 ± 96.4) pg/mL, $p < 0.001$. The effective cut-off value for the diagnosis of CAD was 139 pg/ml, area under curve (AUC) = 0.950, 95% CI: 0.890–1.00). The serum Nt-proBNP was correlated with the severity and complexity of CAD as measured by Gensini score ($r=0.496$, $p<0.001$) and Syntax score ($r=0.443$, $p<0.001$). The mean value of Nt-proBNP in patients with 6 months MACE was insignificantly higher than in patients without 6 months MACE interquartile range (IQR) of 418.5 (139 – 2037) vs. 366 (175 – 3237) pg/ml, $p=0.970$.

CONCLUSION

Nt-proBNP was correlated with the severity and complexity of CAD in NSTEMI-ACS with preserved left ventricular systolic function, but it has no impact on 6 months MACE.

KEYWORDS

Nt-proBNP; non-St elevation acute coronary syndrome; Gensini score; Syntax score

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