[gw22-e0328] **THE CLINICAL SIGNIFICANCE OF N-TERMINAL BRAIN NATRIURETIC PEPTIDE ON ACUTE ST-SEGMENT ELEVATION MYOCARDIAL INFARCTION PATIENTS**

Hua Wang, Mingming Gao *Beijing Chao-yang Hospital Capital Medical University, Beijing, China*

Objective To evaluate the relationship between N-terminal brain natriuretic peptide (NT-proBNP) and prognosis of acute ST-segment elevation myocardial infarction (STEMI), the predictive value of NT-proBNP in coronary artery multi-vessel disease, and whether the level of plasma NT-proBNP can be used as an independent predictor of 6-month MACE.

Methods 207 patients diagnosed as acute STEMI in Chao-yang Hospital in Beijing from September 2009 to October 2010 and had reveived emergency percutaneous coronary intervention (PCI) within 24 h since the symptoms occurred were included. We detected the plasma NT-proBNP level immediately after emergency PCI with immunofluorescence technic, collected clinical data during hospitalisation, including admission age, Killip classification of cardiac function, left ventricular ejection fraction (LVEF) in cardiac ultrasonography, the number of diseased vessels found by coronary angiography, duration from onset to patency of diseased vessels, and then divided the patients into several subgroups according these data and analysed the difference of NT-proBNP among the subgroups. The major adverse cardiac events (Major Adverse Cardiac Event, MACE) occurred in the next 6 months were also collected. Logistic multivariate regression analysis was used to evaluate whether elevated plasma NT-proBNP levels are related to short-term prognosis of acute STEMI patients.

Results (1) Plasma NT-proBNP level increases with the patients' age increasing (r=0.39, p=0.000); (2) As left ventricular ejection fraction (LVEF) decreases, plasma NT-proBNP level increases (r=−0.29, p=0.000); (3) Plasma NT-proBNP level in subgroup cardiac function Killip III–IV and II are higher than Killip I subgroup (p=0.000, p=0.002), and plasma NT-proBNP levels in subgroup cardiac function Killip III–IV and Killip II have no significant difference; (4) The patent time of infarct related artery in STEMI patients are 0 – <6 h (subgroup A), 6 – <12 h (subgroup B) and 12 – 24 h (subgroup C) respectively, and plasma NT-proBNP level increases as the patency time prolongs (p=0.001, p=0.000 and p=0.000); (5) Logistic multivariate regression analysis shows that NT-proBNP is not an independent risk factor for short-term prognosis in STEMI patients.

Conclusion Plasma NT-proBNP levels in acute STEMI patients who received emergency PCI are related to patients' age, LVEF, Killip classfication of cardiac function, the number of diseased vessels, the patent time of criminal vessels, and 6-month MACE. However, the level of plasma NT-proBNP can not be used as an independent predictor of MACE.