

WBC, Neu%, hs-CRP, LDL-c, Glu and Fib ( $p<0.01$ ), but was negatively correlative to LVEF ( $p<0.01$ ). Ang-2 was positively related to hypertension, Neu, LDL-c ( $p<0.05$ ), WBC, Neu%, hs-CRP, Glu and Fib ( $p<0.01$ ), but was negatively related to LVEF ( $p<0.01$ ). Ang-2/Ang-1 ratio had positive relationship with Hypertension, hs-CRP, Fib ( $p<0.05$ ), WBC, Neu% and Glu ( $p<0.01$ ), but had negative relationship with LVEF ( $p<0.01$ ). (6) In AMI patients, Ang-1, Ang-2 and Ang-2/Ang-1 ratio were significant positive correlation to peak CK, CKMB and TnT levels ( $p<0.01$ ).

**Conclusion** The serum levels of Ang-1, Ang-2 and Ang-2/Ang-1 ratio change significantly in different type of coronary heart disease, which could be used to evaluate the disease severity. Moreover, they may become important biomarkers to predict the stability of coronary plaque.

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#### CHANGES AND SIGNIFICANCE OF SERUM ANGIOPOIETIN-1 AND ANGIOPOIETIN-2 LEVELS IN PATIENTS WITH CORONARY HEART DISEASE

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**Objective** Angiotensin-1 (Ang-1) and Angiotensin-2 (Ang-2) are the members of angiotensin families. The regulation between Ang-1 and Ang-2 plays an important role in accommodating endothelial cell function and inflammation. Several recent studies have demonstrated that Ang-1, Ang-2 levels and ratio can strongly predict the condition and prognosis in several inflammatory related diseases. However, there were a little study on the changes and clinical significance of Ang-1 and Ang-2 in the patients with coronary heart disease and whether they may be used to predict disease severity are still unknown. The aim of our study is to investigate the Ang-1, Ang-2 levels and ratio changes and some conceivably influential factors in different type of patients with CHD, explore the predictive value for disease severity and plaque stability.

**Methods** We studied 166 patients admitted to the ward of Cardiology Department in Peking University Third Hospital between September 2010 and April 2011. They were divided into five groups: 35 STEMI, 26 NSTEMI, 40 UA, 40 SA patients and 25 controls. The serum samples were collected before coronary arteriography. Serum concentrations of Ang-1 and Ang-2 were tested by ELISA.

**Results** (1) The serum levels of Ang-1, Ang-2 and Ang-2/Ang-1 ratio in patients with SA, UA, NSTEMI and STEMI were significantly higher than those in the controls ( $p<0.001$ ). (2) Ang-1 and Ang-2 levels in patients with SA, UA, NSTEMI and STEMI increased gradually with significant difference between each two groups ( $p<0.001$ ). Ang-2/Ang-1 ratio was significantly different in each two groups ( $p<0.05$ ), but not SA and UA groups ( $p>0.05$ ). (3) Compared with SA group, the levels of Ang-1, Ang-2 and Ang-2/Ang-1 ratio were significantly higher in ACS group ( $p<0.001$ ). (4) By correlation analysis, Ang-1, Ang-2 and Ang-2/Ang-1 ratio in patients with CHD were positively related to Gensini scores ( $p<0.01$ ). (5) Ang-1 was positively correlative to Neu ( $p<0.05$ ),