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THE ASSOCIATION OF MCP-1 -2518 G/A POLYMORPHISM, ITS SERUM LEVELS WITH UNSTABLE ANGINA PECTORIS

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Objectives To investigate the effects of monocyte chemoattractant protein-1 (MCP-1) -2518 G/A genetic polymorphism on its serum levels and unstable angina pectoris (UAP), and the association of MCP-1 serum level with UAP in Chinese Han population of Sunan region.

Methods The −2518 G/A polymorphism of MCP-1 gene was genotyped in 203 patients with UAP and 192control subjects by PCR-RFLP and DNA sequencing; Serum concentration of MCP-1 was randomly measured in 72 patients with UAP and 73 control subjects by ELISA.

Results No significant difference was found in genotype distribution of the MCP-1–2518G/A between UAP and controls (all $p>0.05$), but G allele frequencies is significant lower in UAP group than that in controls ($p=0.044$). Multivariate logistic regression analysis revealed that MCP-1-2518 G/A polymorphism was not associated with an increased risk of UAP ($p>0.05$). No significance was found in the serum level of MCP-1[(median/IQR) pg/ml] between genotypes of the MCP-1-2518G/A within UAP group and controls, respectively; The serum level of MCP-1 was significantly higher in UAP group (175.89/283.09 pg/ml) than that in controls (100.71/134.02 pg/ml) ($p=0.007$). Multiple linear regression analysis revealed that the serum levels of MCP-1 was associated with hypertension, diabetes mellitus, smoking and female in UAP group. Multivariate logistic regression analysis further revealed an elevated serum level of MCP-1 (>75th percentile) was associated with an increased risk of UAP [$p=0.039$; OR 2.904 (1.058–7.970)].

Conclusions The serum level of MCP-1 was significantly higher in UAP group than that in controls, and an elevated serum level of MCP-1 (>75th percentile) was associated with an increased risk of UAP in Chinese Han population of Sunan region; but the MCP-1-2518G/A polymorphism does not effect its serum levels nor contributes to an increased risk of UAP.