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ASSOCIATION BETWEEN MYELOPEROXIDASE AND CD11B/CD18 ON POLYMORPHONUCLEAR NEUTROPHILS IN PATIENTS WITH CORONARY HEART DISEASE

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Lili Han, Xiaoli Shen, Leng Pan, Saimei Lin, Xiaoqing Liu, Yulian Deng, Xiaodong Pu, Lili Han. *Fujian Provincial Key Laboratory of Cardiovascular Disease, Affiliated Fujian Provincial Hospital, Fujian Medical University*

Objectives Atherosclerosis (AS) is an inflammatory disease. CD11b/CD18 integrins on PMNs and endothelial cell intercellular adhesion molecule-1 (ICAM-1) mediate PMN adhesion to VECs, resulting in localised tissue injury. Myeloperoxidase (MPO) produced by activated PMNs and monocytes is an important inflammation biomarker. The aim of this study was to retrospectively evaluate the association between myeloperoxidase (MPO) and CD11b/CD18 on polymorphonuclear neutrophils (PMNs) in patients with coronary heart disease.

Methods Total plasma MPO levels were measured by ELISA, CD11b/CD18 on the PMNs was measured by the Flow cytometry (FCM). Total cholesterol, triglyceride, low density lipoprotein cholesterol, high density lipoprotein cholesterol, white blood cell (WBC) and PMN count were measured.

Results Mean total plasma MPO level was significantly higher in CHD patients than that in controls (332.05 ± 167.56 pg/ml vs 277.81 ± 142.68 pg/ml, $p < 0.05$). Compared with the controls, CD11b/CD18 level in CHD patients were much higher (53.7 ± 24.1 MFI vs 23.0 ± 10.2 MFI, $p < 0.01$). The serum levels of MPO were not correlated with sex, age, high blood pressure, diabetes, TC, TG, LDL, HDL, but positively correlated with CD11b/CD18, WBC and PMN count.

Conclusions MPO is a inflammation biomarker of coronary heart disease, it may play a role by CD11b/CD18 pathway.