



Interleukin-6 (IL-6) -174G/C genomic polymorphism contribution to the risk of coronary artery disease in a Chinese population

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ABSTRACT. To investigate the role of *IL-6* polymorphism (-174G/C and -572C/G) in the development of coronary artery disease (CAD), CAD patients (224) and control subjects (260) were recruited between January 2012 and December 2014. Genotyping at *IL-6* -174G/C and -572C/G was conducted via polymerase chain reaction coupled to restriction fragment length polymorphism. Results indicated that several disease risk factors were significantly higher in CAD patients as compared to the control subjects. These factors include hypertension ($\chi^2 = 20.03$, $P < 0.001$), diabetes mellitus ($\chi^2 = 33.53$, $P < 0.001$), tobacco smoking ($\chi^2 = 28.17$, $P < 0.001$), body mass indexes ($t = 11.39$, $P < 0.001$), total cholesterol ($t = 8.25$, $P < 0.001$), low-density lipoprotein cholesterol ($t = 7.24$, $P < 0.001$), high-density lipoprotein cholesterol ($t = 3.52$, $P < 0.001$), and triglyceride ($t = 6.09$, $P < 0.001$). By unconditional logistic regression analysis, we observed that the CC genotype at *IL-6* -174G/C was had a 2.32 (95%CI = 1.33-4.06) fold risk of developing CAD compared to the GG genotype. Moreover,

IL-6 -174G/C polymorphism was positively associated with the risk of developing CAD in both dominant (OR = 1.63, 95%CI = 1.12-2.38; P = 0.01) and recessive models (OR = 2.18, 95%CI = 1.26-3.77; P = 0.001). However, no statistically significant association was observed between *IL-6* -572C/G polymorphism and risk of CAD. In conclusion, *IL-6* -174G/C polymorphisms are associated with the pathogenesis of CAD.

Key words: Coronary artery disease; Interleukin 6; Polymorphism