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Association of the G403A polymorphism in the RANTES gene with coronary artery disease: a meta-analysis

K. Cui, X.Y. Ge and H.L. Ma

Department of Epidemiology and Biostatistics, School of Public Health, Liaoning Medical University, Jinzhou, Liaoning, China

Corresponding author: H.L. Ma
E-mail: mahonglinly@163.com

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ABSTRACT. The G403A polymorphism in the RANTES (regulated on activation normal T cell expressed and secreted) gene has a key role in the expression of RANTES, which has been detected in a range of cells in atherosclerotic plaque. However, the association of this polymorphism with the risk of coronary artery disease (CAD) remains controversial. A meta-analysis was performed to assess the association of the G403A polymorphism in the RANTES gene with the risk of CAD. A comprehensive search was conducted to identify all studies published on the association of the RANTES gene G403A polymorphism with CAD risk. The fixed or random-effect pooled measure was adopted based on a heterogeneity test among studies, which was evaluated using I^2. Potential sources of between-study heterogeneity were explored using meta-regression analysis. Publication bias was estimated with Begg's rank correlation method. Eight articles were included in this meta-analysis, with 4601 CAD cases and 2522 controls. No significant association of RANTES gene G403A polymorphism with CAD was identified in any of the codominant, dominant, recessive, homozygote, or heterozygote inheritance models. No evidence of publication bias

was detected. The meta-analysis suggested that the A allele of the G403A polymorphism in the RANTES gene has no effect on the risk of CAD. This relationship needs to be confirmed by further studies.

Key words: Coronary artery disease; Meta-analysis; Polymorphism

