



Association between the PADI4 -94G/A polymorphism and rheumatoid arthritis: a meta-analysis in the Chinese population

H.X. Chang, B. Zhu, J.H. Yao, J. Wu, J. Wang and W. Sun

Department of Orthopedic and Joint Surgery, Beijing Military General Hospital, Beijing, China

Corresponding author: H.X. Chang
E-mail: bjhxchang@126.com

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ABSTRACT. Although a number of studies have been conducted on the association between the peptidylarginine deiminase (PADI4) -94G/A polymorphism and rheumatoid arthritis (RA) in the Chinese population, the association remains elusive and controversial. To clarify the impact of the PADI4 -94G/A polymorphism on the risk of RA, a meta-analysis was performed in the Chinese population. Related studies were identified from databases such as, Springer Link, Ovid, Chinese Wanfang Data Knowledge Service Platform, Chinese National Knowledge Infrastructure (CNKI), and Chinese Biology Medicine (CBM) up to May 21, 2015. Pooled odds ratios (ORs) and 95% confidence intervals (CIs) were used to assess the strength of associations. A total of 10 studies with 2783 RA cases and 2887 controls were included in this meta-analysis. Overall, a significantly elevated risk of RA was associated with all variants of PADI4 -94G/A (A vs G: OR = 1.24, 95%CI = 1.15-1.34; AA + GA vs GG: OR = 1.45, 95%CI = 1.29-1.62; AA vs GG: OR = 1.49, 95%CI = 1.28-1.73; AA vs GG + GA: OR = 1.19, 95%CI = 1.04-1.35). Subgroup analyses stratified by geographic areas and source of controls revealed significant results in the population-based studies in North and South China. In conclusion, this meta-analysis

showed that the PADI4 -94G/A variants may influence RA risk in the Chinese population. However, further studies with gene-gene and gene-environment interactions are required for definite conclusions.

Key words: Meta-analysis; Peptidylarginine deiminase 4; Polymorphism; Rheumatoid arthritis