Association study of polymorphisms between the Radixin gene and rheumatoid arthritis in a Korean population


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ABSTRACT. Radixin (RDX) is part of the ezrin-radixin-moesin (ERM) protein family. It functions as a membrane-cytoskeletal linker in actin-rich cell surface structures and is thought to be essential for cortical cytoskeleton organization, cell motility, adhesion, and proliferation. An increase in phosphorylated ERM in fibroblast-like synoviocytes contributes to rheumatoid arthritis (RA) synovial hyperplasia. We examined the genetic association between the RDX gene and RA in a Korean population. To identify the relationship between RDX gene polymorphisms and RA, we genotyped 2 single nucleotide polymorphisms (SNPs; rs11213326 and rs12575162) of RDX using a
direct sequencing method in 296 RA patients and 493 control subjects. In this study, the 2 SNPs showed no association with RA disease susceptibility. However, further analysis based on clinical information of the RA patient group showed that the SNPs were associated with the erythrocyte sedimentation rate (ESR) in RA patients. These data suggest an association between $RD\dot{X}$ polymorphisms and the clinical features of RA patients, particularly the ESR.

**Key words:** Rheumatoid arthritis; Radixin; SNP