ARI-02

ASSOCIATION OF A BTLA GENE POLYMORPHISM WITH THE RISK OF HEUMATOID ARTHRITIS

Shih-Chang Lin, Chia-Chen Kuo, Chia-Hsi Chan

Division of Allergy and Immunology, Department of Internal Medicine, Cathay General Hospital, Taipei, Taiwan

Department of Medicine, School of Medicine, Fu Jen Catholic University, Hsinchuang, Taipei Shien, Taiwan.

BACKGROUND/AIMS: B and T lymphocyte attenuator (BTLA) is an immuno-inhibitory receptor with the ability to deliver inhibitory signals for suppressing lymphocyte activation. We therefore wished to test the potential association of the human BTLA gene with the development of rheumatoid arthritis (RA).

METHODS: A genetic case-control association study was conducted using a single nucleotide polymorphism (SNP), C+800T SNP, in exon 5 of the human BTLA gene. The C+800T SNP was used to genotype 93 RA patients and 294 normal control individuals for the subsequent statistical comparison.

RESULTS: The results showed that there is a statistically significant difference in the genotype distributions between RA and control groups ($p=0.022$). When compared with the heterozygous genotype (C/T genotype), the homozygous genotype (C/C or T/T genotype) appears to confer an increased risk of the RA susceptibility with an odds ratio of 1.88 ($p=0.015$).

DISCUSSION/CONCLUSIONS: These data indicate a significant association between the C+800T SNP in the BTLA gene with RA susceptibility, suggesting a possible role of BTLA in the pathogenesis of RA.

Key words: Rheumatoid arthritis (RA), B and T lymphocyte attenuator (BTLA), single nucleotide polymorphism (SNP).