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Tumor necrosis factor receptor-II nt587 polymorphism in Chinese Han patients with ankylosing spondylitis

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ABSTRACT. We aimed to explore the association between the onset of ankylosing spondylitis (AS) and nt587 polymorphisms of the tumor necrosis factor receptor II (TNFRII) gene in the Han population of Hunan Province, China. Correlation analysis was performed in a case-control study involving 100 AS cases and 100 healthy controls. The nt587 single nucleotide polymorphism of the TNFRII gene was examined by polymerase chain reaction-restriction fragment length polymorphism. The relationship between AS and the frequencies of genotypes and alleles in TNFRII nt587 were analyzed using the SPSS software. There were 43 cases with the TNFRII nt587 T/T genotype, 32 cases with the TNFRII nt587 T/G genotype, and 25 cases with the TNFRII nt587 G/G genotype. In the 100 healthy controls, 56 subjects had the TNFRII nt587

T/T genotype, 34 had the TNFRII nt587 T/G genotype, and 10 had the TNFRII nt587 G/G genotype. The G allele frequency of the AS group was significantly higher (χ^2 = 8.734, P = 0.003) than that in the control group (41.0 *vs* 27.0%). The odds ratio (OR) in AS cases with the TNFRII nt587 G/G genotype was 3.256, which was obviously higher than in those with T/G (OR = 1.226) and T/T (OR = 1.0) genotype. The polymorphism at position nt587 of the TNFRII gene was found to be associated with AS, and the TNFRII nt587 G allele may play an important role in AS susceptibility. The TNFRII nt587 G/G genotype may increase the risk of developing AS in the Hunan population.

Key words: Ankylosing spondylitis; Tumor necrosis factor; Tumor necrosis factor receptor; Gene polymorphism

