

# The association of TNF related gene polymorphisms with scleritis in Chinese Han

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July 22, 2020

## Abstract

**Purpose:** To examine the association of TNF related genes polymorphisms with scleritis in Chinese Han. **Methods:** A case-control study was carried out in 556 non-infectious scleritis patients and 742 healthy controls. A total of 28 SNPs were genotyped by the Sequenom MassArray® iPLEX GOLD Assay. Genotype and allele frequencies were compared between cases and healthy controls using the  $\chi^2$  or Fisher's exact test, and P values were corrected using the Bonferroni correction method for multiple comparisons. **Results:** No significant association was observed between the individual SNPs in the TNF related genes and scleritis. Haplotype analysis showed a significantly decreased frequency of a TNFAIP3 CGT haplotype (order of SNPs: rs9494885, rs3799491, rs2230926) (Pc=0.021, OR=0.717, 95% CI=0.563–0.913), a significantly increased frequency of a TNFSF4 GT haplotype (order of SNPs: rs3850641, rs704840) (Pc=0.004, OR=1.691, 95% CI=1.205–2.372) and TNFSF15 CCC haplotype (order of SNPs: rs6478106, rs3810936, rs7865494) (Pc=0.012, OR=1.662, 95% CI=1.168–2.363) in scleritis patients compared to healthy controls. **Conclusions:** This study reveals that a three-SNP haplotype of the TNFAIP3 gene (CGT) may be a protective factor for the development of scleritis and that a two-SNP haplotype of the TNFSF4 gene (GT) and a three-SNP haplotype of the TNFSF15 gene (CCC) may be risk factors for scleritis in Chinese Han.

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