

Poster presentation

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Tumor necrosis factor-alpha polymorphism and susceptibility to juvenile idiopathic arthritis

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Background

Juvenile idiopathic arthritis (JIA) is a complex, multifactorial and chronic inflammatory disease of unknown etiology with considerable variability in which tumor necrosis factor-alpha (TNF- α) plays an important role. Both genetic and environmental factors can contribute to a susceptibility to disease initiation as well as a severity of disease course. TNF- α polymorphisms may be an independent marker of susceptibility and severity of JIA. The aim of this study was to elucidate putative association between the -863 C/A polymorphism in the promoter region of the TNF- α gene and susceptibility to onset and severity of JIA.

Methods

We used PCR-RFLP (polymerase chain reaction – restriction fragment length polymorphism) method to detect the -863 C/A polymorphism. We analyzed DNA samples from 76 patients with JIA and 80 healthy individuals.

Results

The distribution of TNF- α genotypes in cases differed significantly from that in the controls, comparing TNF- α A carriers (CA or AA genotypes) with noncarriers (CC genotype) (OR = 2.49; 95% CI: 1.21–5.14; P = 0.01). However, TNF- α -863 C/A allele frequencies were not significantly different between cases and controls.

Conclusion

The TNF- α CC genotype was associated with increased risk factor for JIA in a sample of Turkish patients.