



Meta-analysis of the TNF- α -308G/A polymorphism and vitiligo risk

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ABSTRACT. Several case-control studies have been conducted to investigate the association between the tumor necrosis factor- α (TNF- α)-308G/A polymorphism and vitiligo risk. However, the results of these studies are inconsistent; therefore, we attempted to comprehensively evaluate the association between TNF- α -308G/A polymorphism and vitiligo risk via a meta-analysis. Studies reporting the association between TNF- α -308G/A polymorphism and vitiligo risk were retrieved from PubMed and EmBase databases. Data were extracted from these studies and the pooled odds ratios (ORs) with 95% confidence intervals (CIs) were calculated to assess the association. Six case-control studies including 1391 vitiligo cases and 2455 control subjects were included in this meta-analysis. The overall results showed the lack of a significant difference in TNF- α -308G/A genotype distribution between the patients and controls when the G allele and GG, GG + GA, GG, and GG genotypes were compared against the A allele and the GA + AA, AA, AA, and GA genotypes, respectively (ORs = 0.65, 0.53, 0.63, 0.41, 0.55; 95%CI = 0.35-1.23, 0.24-1.18, 0.10-4.09, 0.08-1.97, 0.25-1.21; P = 0.188, 0.121, 0.627, 0.264, 0.135, respectively). This

meta-analysis suggests that the TNF- α -308G/A polymorphism may not be associated with vitiligo risk. As few studies are available in this field and current evidence remains limited, these results must be corroborated with well-designed and larger studies in the future.

Key words: Meta-analysis; Tumor necrosis factor- α ; Polymorphism; Vitiligo