Angiotensin-converting enzyme insertion/deletion polymorphism and susceptibility to systemic sclerosis: a meta-analysis

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ABSTRACT. The purpose of this study was to examine whether the insertion (I) or deletion (D) polymorphism of the angiotensin-converting enzyme gene (ACE) is associated with susceptibility to systemic sclerosis (SSc). A meta-analysis examining the associations between the ACE I/D polymorphism and SSc was conducted in overall and European populations using 1) allelic contrast (D vs I); 2) recessive (DD vs ID + II); 3) dominant (DD + ID vs II); and 4) additive (DD vs ID vs II) models. A total of 7 studies consisting of 837 cases and 754 controls were available for meta-analysis. The meta-analysis revealed no association between the D allele and SSc in any study subjects [odds ratio (OR) = 0.956, 95% confidence interval (CI) = 0.733-1.246, P = 0.737]. Stratification by ethnicity indicated no association between the D allele of the ACE I/D polymorphism and SSc in Europeans (OR = 1.117, 95%CI = 0.776-1.607, P = 0.551). Meta-analysis using all other genetic models showed the same D allele pattern in the overall and European groups. This meta-analysis showed that the ACE I/D polymorphism was not associated with susceptibility to SSc in the study subjects and in Europeans.

Key words: Angiotensin-converting enzyme; Meta-analysis; Polymorphism; Systemic sclerosis; Association