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Association between angiotensin-Converting enzyme insertion/deletion polymorphism and hypertension risk among Saudi subjects from Alkharj region

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This study was planned to check for the association of the Angiotensin-Converting Enzyme Insertion-Deletion (ACE I/D) polymorphism with development of hypertension among Saudi subjects from Alkharj. This work included 120 subjects, 72 having hypertension and 48 normal controls. Their age mean ± SD was 42.20±10.89 and 48.48±11.04 years respectively. Their DNA was analyzed for polymorphisms of ACE; I/D genes using real-time PCR. The frequency of ID and DD genotype was significantly higher in hypertensive patients group and in (P <0.001), compared to the healthy control group, Similarly, the D allele frequency was also higher in these HTN group comparing to the control group. The genotypic and allelic distributions among the subjects were analyzed. In Saudi subjects, the genotypic frequencies of ACE gene for II, ID and DD were 57.3%, 37.5% and 4.2%, respectively in Group 1(control) whereas in Group 2 (HTN) 38.9%, 50.00% and 11.1% (p=0.028) were observed, respectively. The results suggested that the ACE I/D polymorphism may contribute to development of hypertension in Saudi population.

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