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DNA Polymorphisms of Renin-Angiotensin System in Korean Hypertensive Subjects.

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The key role of the gene products of the renin angiotensin system (RAS) in the regulation of blood pressure motivates the study of the genes of this system. In the present study, we determined allele frequencies of the angiotensinogen (ACT), angiotensin I-converting enzyme (ACE) and angiotensin II type I receptor (ATR) genes of RAS. Our data showed no significant differences in allele frequencies between hypertensive and normotensive subjects. The genotype frequency of the ATR gene revealed the significant departure from Hardy-Weinberg equilibrium in hypertensive group (P<0.05). These results are unlikely that the three polymorphisms, at least in Koreans, contributes to the incidence of hypertension.

Variations of the Apo E-CI-CII Cluster Gene in Koreans
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Rather than single gene defect, impaired functions in two or more genes which control lipid transport and metabolism have been suspected to cause inherited lipoprotein disorders or atherosclerosis. In the present study we determined allele frequencies of the apo E-CI-CII cluster gene in Koreans. Variants of apo E gene did not show the effect on lipid levels. The rare allele frequency of the *HpaI* RFLP of the apo CI gene in Koreans is significantly higher than in a Caucasian population (P<0.05). The PIC of the *AvaII* RFLP of the apo CII gene showed relatively high value (0.37). We could not find the variant band in the *PstI* site. The *E3-H1-A1* haplotype is the most common in Koreans. Cholesterol and triglyceride levels varied significantly among *AvaII* genotypes (ANOVA test, P<0.05). *AvaII* polymorphism was developed by PCR in place of Southern analysis described previously. Thus, RFLP loci of apo E-CI-CII cluster gene may be a useful genetic marker for clinical or population studies.