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Polymorphism of human leptin receptor gene in Korean obesity subjects

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In the present study, whether polymorphisms in Gln223Arg and Pro1019Pro of the leptin receptor (Ob-R) gene are associated with obesity in Koreans was investigated. DNA was extracted from whole blood and genotyped by PCR-RFLP. Height, weight and blood pressures of Korean subjects were measured. Total cholesterol, triglyceride and HDL-cholesterol concentrations were measured by an autoanalyzer. The obesity indices, body mass indices (BMI) and LDL-cholesterol concentrations were calculated by their respective formulae. 113 subjects participated in this study(male 46, female 67). In obese subjects, the allelic frequencies of polymorphic sites at codons 223 and 1019(Gln223Arg and Pro1019Pro) were 91.4 and 87.1%, respectively. In non-obese subjects the frequencies were 91.8 and 86.4%, respectively. In the case of the Gln223Arg polymorphism of the Ob-R gene, the number of obese subjects with Gln/Arg or Arg/Arg genotype was higher than that of non-obese subjects, although the difference was statistically insignificant. The obesity indices of subjects with the Arg/Arg genotype was higher than those of subjects with the Gln/Arg genotype. In the case of the Pro1016Pro polymorphism of the Ob-R gene, the number of obese subjects with the Pro/pro genotype was higher than that of subjects with the pro/pro genotype.