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Association of adiponectin gene polymorphisms with hypertensive disorder complicating pregnancy and disorders of lipid metabolism

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ABSTRACT. The aim of this study was to determine whether single nucleotide polymorphisms (SNPs) in *APM1* contribute to disorders of lipid metabolism in hypertensive disorder complicating pregnancy (HDCP). The study included 178 pregnant women with HDCP and 243 healthy pregnant controls. Using PCR-restriction fragment length polymorphism, we detected the frequencies of genotypes, alleles, and haplotypes of two SNPs, +45T>G (rs2241766) and +276G>T (rs1501299), in *APM1*. We found that the SNP +276 TT genotype was significantly associated with protection against HDCP compared to the pooled G genotypes. The genotype and allele frequency distributions of SNP +276 were significantly different between the cases and controls. Single-point genotype and allele distributions in SNP +45 were not statistically different between the groups. The pooled G haplotypes were significantly overrepresented in the case group compared to the TT haplotype. Plasma adiponectin (APN)

concentration was determined by enzyme-linked immunosorbent assay, and we found that APN levels in cases were significantly lower than those in controls. Using the clinical data, we evaluated the correlation between the two SNPs and HDCP development, and revealed an association between the two SNPs and disorders of lipid metabolism in patients with HDCP. Except for fasting insulin levels, which was higher in cases than in controls, there were no significant differences in the other clinical data between the two groups.

Key words: APM1; SNPs; HDCP; Disorders of lipid metabolism

