



Correlation analysis of the *PNPLA7* gene polymorphism and susceptibility to menstrual disorder

Y. Su, G.L. Kong, Y.L. Su, Y. Zhou, L.F. Lv, Q. Wang, B.P. Huang, R.Z. Zheng, Q.Z. Li, H.J. Yuan and Z.G. Zhao

Department of Endocrinology,
The People's Hospital (Henan Provincial People's Hospital),
Zhengzhou University, Zhengzhou, China

Corresponding author: L.F. Lv
E-mail: yongsudoc@163.com

Genet. Mol. Res. 14 (1): 1733-1740 (2015)
Received February 10, 2014
Accepted August 27, 2014
Published March 6, 2015
DOI <http://dx.doi.org/10.4238/2015.March.6.20>

ABSTRACT. We examined the correlation between *PNPLA7* gene polymorphisms at the rs61754920 and rs11137410 loci and menstrual disorder in women of reproductive age in the Central Plain. Genomic DNA was extracted from peripheral blood; polymerase chain reaction-ligase detection reaction and SNaPshot genotyping were used to detect polymorphisms in the rs61754920 and rs11137410 gene loci, respectively. The results for the 2 loci in individuals of different blood types were statistically analyzed. The proportion of the AA homozygote at the rs61754920 locus in the *PNPLA7* gene was the lowest, while the proportion of the CC homozygote at the rs11137410 locus in the *PNPLA7* gene was the highest. There were no statistical differences in the frequency distribution of genotypes and alleles at the 2 loci between control and test groups. The frequency of the TT genotype at the rs11137410 locus in women with type O blood was significantly lower in the test group than in the control group. Frequencies of the C and T alleles were significantly different between the 2 groups. There

may be an association between the *PNPLA7* gene and type O blood or a combined effect of the 2 genes.

Key words: Gene polymorphism; Menstrual disorder; *PNPLA7* gene; Susceptibility; Type O blood