GW23-e1395 **HAPLOTYPE STUDY OF THE CYP4A11 GENE AND CORONARY ARTERY DISEASE IN A HAN AND A UYGUR POPULATION OF CHINA**

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Objectives CYP4A11 (cytochrome P450, family 4, subfamily A, polypeptide 11) converts arachidonic acid to 20-hydroxyeicosatetraenoic acid (20-HETE), which plays a crucial role in the modulation of cardiovascular homeostasis. The aim of the present study was to assess the association between the human CYP4A11 gene and coronary artery disease (CAD) in a Han and a Uygur population of China.

Methods In a Han population, 361 CAD patients and 315 controls were genotyped for 4 single-nucleotide polymorphisms (SNPs) of the human CYP4A11 gene (rs9332978, rs4660980, rs3890011, rs1126742). In a Uygur population, 331 CAD patients and 182 controls were genotyped for the same 4 SNPs. The data were assessed via a haplotype-based case–control studies.

Results In a Han population, the distribution of SNP3 (rs3890011) genotypes showed a significant difference between CAD and control subjects (p=0.030), the distribution of the recessive model of SNP3 (GG vs CC+GC) was significantly higher in CAD patients than control subjects (p=0.011), the significant difference was retained after adjustment for covariates (95%CI: 1.137–2.423, p=0.009). Three SNPs (SNP1, SNP3, SNP4) were located in one haplotype block, and the overall distribution of haplotypes constructed with these SNPs was significant (p=0.023). The G-G-T haplotype in CAD was significantly higher than that in control group (p=0.037). In a Uygur population, neither the distribution of genotypes and alleles for the 4 SNPs showed significant difference nor the distribution of haplotypes constructed with the same three SNPs between CAD and control subjects.

Conclusions GG genotype of rs3890011 in CYP4A11 gene is associated with CAD in a Han population of China. The G-G-T haplotype could be a useful genetic marker of CAD in a Han population of China. There is no association between the 4 SNPs (rs9332978, rs4660980, rs3890011, rs1126742) of the CYP4A11 gene and CAD in a Uygur population of China.