to Feb.2012.The vasodilator-stimulated phosphoprotein (VASP) phosphorylation state was determined by flow-cytometry in all patients received a 600mg loading dose of Clopidogrel. Patients enrolled were divided into CR group and Non-CR (Non-clopidogrel resistance, NCR) group according to the value of VASP index. A VASP index of $\geq$50% was regarded as CR. The presence of CYP2C19*2 polymorphisms was determined by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) analysis combined with sanger dideoxy mediated chain termination method. The distribution of the frequencies of genotypes and alleles among CR and NCR groups was analysed.

Results Demographic and Clinical characteristics including age, gender, history of Hypertention, Dyslipidemia, concurrent medications, such as Stains, Calcium channel inhibitors, Proton pump inhibitor, did not differ between the two study groups (p>0.05). When compared with the NCR group, the proportion of Overweight,Type2 Diabetes mellitus and ACS were significantly higher in the CR group (p<0.05) while the proportion of smokers were significantly higher in the NCR group (p<0.05).80 patients was defined as CR, indicating the occurrence of CR at a rate of 58.82%. Patients with ACS were at a higher rate of occurrence of CR than patients with SAP (67.12% vs 51.67%, p<0.05).The genotype (GG/GA/AA) distribution of the CYP2C19*2 gene polymorphisms were 47.54%,46.22%,6.24% and 69.63%,26.80%,3.57% in the CR and NCR groups, respectively. Statistically significant difference was observed between CR and NCR groups for distribution of the genotypes (p<0.05). Frequency of AA genotype was significantly higher in CR group than in NCR group (p<0.05), Frequency of A allele was significantly higher in CR group than in NCR group (29.37% vs 16.96%, p<0.05),A allele carriers were more likely to develop CR(OR=2.04, 95% CI:1.12 to 3.71, p<0.05). Binary logistic regression analysis adjusted for the presence of traditional risk factors including Age, Gender, BMI, Smoking, Hypertention, Dyslipidemia, Type 2 Diabetes, the CYP2C19*2 polymorphism resulted an independent risk factor for CR (OR=3.259, 95% CI:1.23 to 4.19, p<0.05).

Conclusions CYP2C19*2 gene polymorphism is associated with the occurrence of CR in the Han population of North China with CAHD; CYP2C19*2, that is to say, A allele might be an important genetic risk factor for the development of CR.

GW23-e0825 | **THE ASSOCIATION BETWEEN CYP2C19*2 GENE POLYMORPHISMS AND CLOPIDOGREL RESISTANCE IN THE HAN POPULATION OF NORTH CHINA WITH CORONARY ATHEROSCLEROTIC HEART DISEASE**

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Objectives Due to the diversification of platelet function test and defined criteria applied in previous studies, there is a big difference in the incidence of CR. Besides, it remains unclear of the mechanisms underlying CR and gene polymorphisms is regarded as an major factor of individual differences of drug response. The present study aimed to elucidate the preliminary association between CYP2C19*2 (Cytochrom P450 2C19,CYP2C19*2) gene polymorphisms that plays an important role in clopidogrel biotransformation to its active form and CR in the Han population of North China with Coronary Atherosclerotic Heart Disease (CAHD).We further aimed to provide evidence on the early predication of CR and implement of individualised and rationalised drug therapy when a variety of new antiplatelet drugs were available nowadays.

Methods 136 patients with angiographically documented CAHD in the Han population of North China were enrolled from Mar.2011