

Relationship between Cytochrome P450 2E1 Gene Polymorphism and Susceptibility of Low Birth Weight Infants

Xiaoli Liu, Juan Du, Pei He, Xuemei Gao and Xiaoyan Deng[#]

Department of Obstetrics and Gynecology, Wuhan No.1 Hospital, Wuhan 430022, China

KEYWORDS Cytochrome p450 2E1. Gene Polymorphism. Low Birth Weight. Susceptibility

ABSTRACT The purpose of this study is to investigate the relationship between cytochrome P450 2E1 (CYP2E1) RsaI/PstI and DraI single gene polymorphism (SNP) and low birth weight infants (LBW) of Chinese population. The researchers detected CYP2E1 RsaI/PstI and DraI SNPs by real-time PCR cycling and HRM analysis in 461 premature delivery and 461 healthy pregnant women. This paper found that RsaI/PstI C₂C₂ was statistically significantly correlation with increased risk of LBW (Odds ratios= 0.66, 95% CI: 0.44–0.98, P = 0.04) and (Odds ratios = 0.75 , 95% CI: 0.56–0.99, P=0.04) for C₂C₂, compared with C₁C₁ and C₁C₁ + C₁C₂, respectively. When CYP2E1 RsaI/PstI and DraI SNPs combine, the risk of low birth weight infants was increased in individuals with both DraI TT and RsaI/PstI C₂C₂ genotypes (Odds ratios=0.59, 95% CI=0.36–0.97). The current study demonstrates CYP2E1 RsaI/PstI polymorphism is significantly related to LBW and the interaction between the RsaI/PstI and DraI polymorphisms has a significant impact on LBW.