Association between single nucleotide polymorphisms in the programmed cell death 6 gene and the risk of endometrial cancer in Chinese Han women

The programmed cell death 6 (PDCD6) gene, originally identified as a pro-apoptotic gene, has recently been reported to have contradictory roles in different diseases and may promote cell proliferation. Here, we examined whether single nucleotide polymorphisms (SNPs) in PDCD6 were associated with endometrial cancer (EC). The genotypes of these two SNPs (rs3756712 and rs4957014) in PDCD6 were distinguished by polymerase chain reaction-restriction fragment length polymorphism in 238 patients with EC and 518 controls. Briefly, the T allele of rs3756712 was found to increase EC risk (P = 0.028, odds ratio [OR] = 0.747). Moreover, EC risk was associated with these two SNPs in different genetic models (P = 0.031, OR = 1.42 for rs3756712 in the dominant model; P = 0.019, OR = 0.63 for rs4957014 in the codominant model; P = 0.0073, OR = 0.65 for rs4957014 in the dominant model; P = 0.0076, OR = 0.66 for rs4957014 in the overdominant model). Results of stratified analyses revealed that rs4957012 was linked to body mass index (BMI) and parametrial invasion and that rs4957014 was associated with BMI, although this association was not statistically significant (P = 0.065, OR = 4.42, 95% confidence interval = 1.06-18.51). Our results indicated that these two tag SNPs in PDCD6 were associated with EC, suggesting that PDCD6 may play a crucial role in the tumorigenesis of EC.

Biography

Mingwei Yuan has graduated from Tianjin Medical University majoring in clinical medicine and now is a postgraduate student majoring in gynecology and obstetrics in West China Second University Hospital, Sichuan University, Chengdu, Sichuan, PR China. She has published 1 paper in SCI journals and has joined 5 scientific programs.

ymwscu@163.com