Obesity risk prediction among women of Upper Egypt: The impact of serum vaspin and vaspin rs2236242 gene polymorphism

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Abstract:

Abstract Background: Vaspin is an adipokine that is potentially linking obesity, insulin resistance, metabolic syndrome and type-2 diabetes. Aim: The present study aimed to investigate the impact of vaspin rs2236242 gene polymorphism on the risk of obesity, diabetes, their metabolic traits, and serum vaspin levels in a sample of Upper Egyptian women. Subjects and methods: A total of 224 subjects, 112 obese (62 non diabetics, 50 diabetics) and 112 controls were included in this case control study. Vaspin gene rs2236242 polymorphism was performed using etraamplification refractory mutation system-polymerase chain reaction (T-ARMS-PCR) and serum vaspin levels were estimated by ELISA. Results: The minor (A) allele of vaspin rs2236242 gene polymorphism was significantly lower in obese (30.8%) than controls (43.7%) (P = 0.005). The protective effect was evident in dominant and recessive inheritance models (TT vs TA + AA, P = 0.004 and TT + TA vs AA, P = 0.036). After adjusting genotypes for diabetes there were no significant association between vaspin rs2236242 gene polymorphism and obesity but significant association was maintained in the obese diabetics. Vaspin serum levels were found to be lower in minor protective (AA) genotype carriers than the other two genotypes (P

Keywords:

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