THE CHANGE IN VASPIN MRNA EXPRESSION IN PREGNANT WOMEN WITH GESTATIONAL DIABETES MELLITUS AND THEIR RELATIONSHIP WITH METABOLISM

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Objective: To investigate relationship between Vaspin mRNA expression with metabolism in Chinese women with gestational diabetes mellitus (GDM).

Methods: In a prospective study, abdominal subcutaneous and omental adipose tissues were obtained during elective cesarean section in 43 GDM women identified by WHO criteria and 43 normal glucose test (NGT) women matched for age (±1yr), exact parity, BMI, and gestational weeks at delivery (±1wk). Real-time quantitative PCR was used to measure the Vaspin mRNA expression in both sites of adipose tissues in the two groups. Fasting lipids levels predelivery were measured simultaneously. The relationship between Vaspin mRNA expressions in different parts of adipose tissue with metabolism parameters were analyzed.

Results: 1. The expressions of Vaspin mRNA in both subcutaneous and omental adipose tissues in GDM group were significantly higher than those in NGT group (0.33±0.06 vs 0.30±0.05 and 0.58±0.16 vs 0.48±0.15, P < 0.05, respectively). 2. The expressions of Vaspin mRNA in both abdominal subcutaneous and visceral adipose tissues were significantly correlated with BMI at prepregnancy and delivery (P < 0.01), 0h and 2h-PG of OGTT (P < 0.01) respectively; however, there were no correlations between the expressions of Vaspin mRNA with lipid parameters.

Conclusion: Our research show that the elevated expressions of Vaspin mRNA in abdominal subcutaneous and omental adipose tissues are associated with impaired glucose tolerance, but not with lipid levels in pregnant women, which could be one of the foundations of abnormal metabolism in GDM.

Key word: gestational diabetes mellitus; adipose tissue; vaspin; metabolism