

Studying relatise of serum level of microrna 27a and Gestational Diabet and Macrosomia

ABSTRACT

Background and objective: Gestational Diabetes (GD) is one of the major public health issues. One of the main forms of diabetes is gestational diabetes mellitus (GDM) defined as glucose intolerance that occurs for the first time or is first identified during pregnancy. The purpose of the present study was to evaluate of serum microRNA-27a and its association with gestational diabetes mellitus and macrosomia.

Methods: In this case-control study, 20 mothers with gestational diabetes mellitus who referred to Ardabil Alavi Hospital and diagnosed with diabetes mellitus were fetched for them after obtaining consent and completing the designed questionnaire, blood samples were taken and extracted and analyzed by MicroRNA-27a. The mothers of the control group were selected from mothers with non-diabetic gestational diabetes and tests for the control group were also performed in their blood samples. The relationship between MicroRNA-27a and gestational diabetes mellitus was investigated in both case and control groups, and the relationship between MicroRNA-27a and neonatal macrosomia was investigated after infant birth and then the statistical analysis software was analyzed.

Results: In this study, the mean for serum level of MicroRNA-27a in the case group was 1.158 ± 0.25 and in the control group was 0.49 ± 0.11 . The results showed that there was a significant difference between the two groups in terms of serum level of MicroRNA-27a. The mean of gestational age in this study was 38.95 ± 0.36 weeks and the mean weight of newborns was 3681.25 ± 466.12 and the mean BMI of the subjects was 25.61 ± 3.78 . There was no statistically significant difference in serum level of MicroRNA-27a between the sexes of newborns in the patients group. In this study (20%), 8 newborns were macrosomal (4 in each group). There was no statistically significant difference between the two groups in terms of macrosomia.

Conclusions: Our data identified a microRNA-27a signature involvement in GDM.

Key words: MicroRNA-27a, Gestational diabetes mellitus, Macrosomia