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Serum homocysteine level in gestational diabetes: a prospective study

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Abstract:

Background: Increased total plasma homocysteine (Hcy) is an accepted risk factor of cardiovascular disease (CVD), stroke, preclampsia, recurrent abortion and diabetes type I and II. The aim of the current study was to assess serum homocysteine and its relation with serum folat, vitamine B12 and lipid profile in gestational diabetes mellitus and to compare these with those of pregnant women.

Methods: In a prospective controlled survey 80 pregnant women (24-28 weeks) with uncomplicated pregnancies were evaluated. They were assigned to one of two groups according to the results of 100g-OGTT. In the case group there were pregnant women with gestational diabetes mellitus according to the OGTT and in the control group women who had normal OGTT results were put. Levels of fasting glucose, homocysteine, vit B12, and folic acid, uric acid, total cholesterol, triglyceride, Low Density Lipoprotein cholesterol (LDL) and High Density Lipoprotein cholesterol (HDL) were measured in both groups.

Results: The mean level of homocysteine in GDM group was significantly higher than control group (p=0.000). The mean level of folic acid and vit B12 was significantly lower than the level in control group (p=0.001, p=0.004 respectively). Body mass index (BMI) in GDM group was higher (p=0.000) and HDL level was lower (p=0.006) than control group. There were no significant differences among the groups with respect to levels of total cholesterol and triglyceride.

Conclusion: We found that patients with gestational diabetes have higher homocysteine level than normal pregnant women. This increased level seems to be related to an abnormal OGTT. Further investigations are needed to follow up these patients in the postpartum period and later on.

Keywords:

Homocysteine , folic acid , vit.B12 , gestational diabete

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