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Original Article

Maternal glycemc status in GDM patients after delivery

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Abstract:

Background: Women with history of gestational diabetes mellitus (GDM) have higher risk for developing diabetes in the future life. The aim of the current study was to examine the association between GDM and susceptibility to type 2 diabetes and Impaired Glucose Tolerance (IGT) after pregnancy.

Methods: As a cohort study, 2416 women who had consecutively referred to five university educational hospitals in Tehran, Iran for antenatal care, were recruited. The universal screening was performed with a GCT-50g and those with plasma glucose level ≥ 130 mg/dl were diagnosed as GDM if they had an impaired GTT-100g based on Carpenter and Coustan criteria. All participants followed by 6-12 weeks after delivery for OGTT-75g. Concerning American Diabetes Association criteria was diagnosed post-partum diabetes mellitus and IGT.

Results: The prevalence of overt postpartum diabetes mellitus and IGT were 8.1% (CI 95%: 3.5-15.4) and 21.4% (CI 95%: 13.7-30.8), respectively. We found a significant difference in the prevalence of hyperglycemia (FBG >105 mg/dl during pregnancy), necessity to use insulin during pregnancy and BMI ≥ 27 kg/m² before pregnancy in patients who developed diabetes after delivery as compared with normal controls. Results of multivariate analysis suggested that gestational necessity for insulin prescribing and BMI ≥ 27 kg/m² were the two best predictors for developing postpartum diabetes. As well our findings demonstrated that the best predictors for postpartum IGT were history of abortion, gestational insulin therapy and BMI ≥ 27 kg/m². This correlation was present after adjusting for the age.

Conclusion: It seems that high glucose levels during pregnancy, necessity for insulin therapy during pregnancy, history of abortion and BMI ≥ 27 kg/m² are the best predictors for postpartum development of diabetes and IGT.

Keywords:

Gestational diabetes mellitus . Type 2 diabetes . Predictive factors . IGT

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