ASSOCIATION OF HYPERTRIGLYCERIDAEMIA WITH GESTATIONAL DIABETES AND PREGNANCY COMPLICATIONS

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Background: We aimed to determine whether high plasma triglyceride levels in the second trimester of pregnancy are associated with adverse pregnancy outcomes including preterm birth, gestational diabetes mellitus, pre-eclampsia and high uterine artery pulsatility index. Methods: This prospective cohort study was done between 2008 and 2010 at Tehran Women General Hospital. Study participants were all normal pregnant women 20–35 years of age referred for routine prenatal care. Plasma levels of low-density lipoprotein cholesterol, high-density lipoprotein cholesterol and triglyceride were measured after 8 hours of overnight fasting. We compared the outcomes of 45 pregnant women who had high triglyceride levels (≥195 mg/dl) with 135 pregnant women with triglyceride levels (195 mg/dl). The main outcome measures were the incidence of preterm birth, gestational diabetes, pre-eclampsia and uterine artery pulsatility index. Results: Eight women with high triglyceride levels had pre-eclampsia (17.8% v. 3.7% in the control group, p=0.004), preterm birth occurred in 24.4% and 5.9% in the high triglyceride group and the control group, respectively (OR 5.1, 95% CI 1.9–13.8, p=0.0001). The incidence of gestational diabetes in the high triglyceride group was significantly higher than that in the control group. There was no difference in uterine artery Doppler ultrasound between the two groups. Conclusion: There is a positive relation between hyper-triglyceridaemia and pre-eclampsia, preterm birth and gestational diabetes.