245 Postpartum dyslipidemia is highly prevalent in women with gestational diabetes mellitus

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OBJECTIVE: To determine the prevalence of dyslipidemia in postpartum women diagnosed with gestational diabetes mellitus (GDM) and to evaluate the impact of Body Mass Index (BMI) on the presence of dyslipidemia.

STUDY DESIGN: A prospective cohort study comprising patients diagnosed with GDM was performed. A fasting lipid profile was analyzed at 6 weeks postpartum. Dyslipidemia was defined as having at least one of the following: raised total cholesterol, raised low-density lipoprotein (LDL), decreased high-density lipoprotein (HDL) or raised triglycerides. The prevalence of dyslipidemia was compared across BMI categories.

RESULTS: Of 82 patients participating in the study 63.4% (52/82) had an abnormal fasting lipid profile at 6 weeks postpartum. The average age of the study population was 33.0 years. The prevalence of dyslipidemia increased significantly with increasing BMI from 50% in women with a normal BMI to 89% in those with class II-III obesity ($p=0.03$, OR: 1.78). Raised total cholesterol and raised LDL were the most common forms of dyslipidemia occurring in 56% and 41% of the population respectively.

CONCLUSION: Women diagnosed with GDM are at high risk of dyslipidemia. This risk increases with increasing BMI category. Other studies have shown that women with GDM have an increased risk of developing type II diabetes mellitus and an increased risk of developing cardiovascular disease independent of type II diabetes mellitus. Dyslipidemia, an important risk factor for cardiovascular disease, is already highly prevalent in women with GDM at a young age. Awareness of, and investigation for, this potentially modifiable risk factor is important. All patients with GDM should have a fasting lipid profile performed postnatally as well as a full assessment of cardiovascular risk.

246 High incidence of hypertrophic cardiomyopathy and cardiac dysfunction in fetuses of diabetic mothers

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OBJECTIVE: To prospectively evaluate the risk of hypertrophic cardiomyopathy (HCM) and cardiac dysfunction in fetuses of women with Type 1 and 2 diabetes mellitus (DM) and determine if elevated maternal levels of cardiac mitogen, insulin-like growth factor-I (IGF-I), confer increased risk.

STUDY DESIGN: Participating women with DM underwent a fetal echocardiogram at 36 weeks gestation by a pediatric cardiologist blinded to glycemic control. HCM was defined as septal or free wall thickness of $>$ 5mm and cardiac dysfunction as a modified myocardial performance index (MPI) $>$.43 (Van Mieghem, 2009). Maternal serum IGF-I levels were measured with ELISA.

RESULTS: 32 (of 100 planned) participants underwent fetal echocardiography. The average age was 33 years, 31% were nulliparous, and 28% privately insured. On average, prenatal care was initiated at 11 weeks with an HgbA1C of 6.7% (range 5-10.5%). 72% had Type 2 DM. The cesarean delivery rate was 60%; the average gestational age at delivery was 38.6 with a mean birthweight of 3778g. 28% of infants were $>$ 4000g. Only 12 (37%) fetuses had normal echocardiograms. 7(22%) had HCM, 9 (28%) had dysfunction and 4(13%) had both. Among normal fetuses, mean maternal IGF-I was 0.48 $\pm$ .26 ng/ml compared to 0.69 $\pm$ .38 ng/ml for those with HCM and 0.77 $\pm$ .42 ng/ml with dysfunction and 0.93 $\pm$ .41 ng/ml for those with both (ANOVA, $p>0.05$.). Planned follow-up neonatal echocardiogram at 2 days of life demonstrated continued HCM in 5/13 (38%) and other cardiac anomalies (VSD, pulmonary hypertension) in 3 infants. There were no significant differences in maternal glycemic control, BMI, weight gain, birthweight, neonatal hypoglycemia, RDS or macrosomia in those with normal versus abnormal fetal echocardiograms.

CONCLUSION: HCM and cardiac dysfunction ascertained in the late third trimester occur frequently in fetuses of diabetic women and do not appear to correlate with maternal glycemic control. Elevated maternal IGF-I may be associated with concomitant dysfunction and hypertrophy.

247 Pregnancy outcomes in patients diagnosed of gestational diabetes mellitus by criteria established by Carpenter and Coustan versus that by The International Association of Diabetes and Pregnancy Study Group

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OBJECTIVE: To compare the pregnancy outcomes in gestational diabetic patients by criteria established by Carpenter and Coustan (Group 1) versus that by The International Association of Diabetes and Pregnancy Study Group-IADPSG (Group 2).

STUDY DESIGN: We performed a retrospective cohort study of pregnant patients who met criteria for GDM during the 100-g or 75-g oral glucose tolerance test (GTT). In Group 1, GDM was diagnosed using criteria established by Carpenter and Coustan with the 100-g oral GTT. Group 2 consisted of gestational diabetic patients who underwent the 75-g oral GTT and met the criteria established by IADPSG. Patients with abnormal fastng glucose were excluded.

RESULTS: Group 1 and 2 consisted of 205 and 142 patients respectively who delivered in a community hospital between 2010 and 2012. There was no statistical significant difference in the percent of multiparity, body mass index, and weight gain during the pregnancy. Patients in Group 2 was diagnosed of gestational diabetes mellitus (GDM) sooner at 26.9 weeks than those in Group 1 at 27.8 weeks gestation. However, there was no statistical difference in the gestational age at delivery, neonatal birthweight, and incidence of birthweight of 4,000 gm or more. There was a statistical significant difference in the method of treatment of GDM during the pregnancy. 56.1% of patients in Group 1 while 77.9 % of patients in Group 2 required diet and exercise. Medical treatment including glyburide or insulin was required in 43.9% of Group 1 patients while only 22.1% of Group 2 patients required this mode of therapy ($P = < 0.0001$). There was a significant higher percent of patients in Group 1 who required cesarean delivery (49.3% vs 34%; $P = 0.0108$).

CONCLUSION: Using a lower threshold in the diagnosis of GDM does not seem to improve the pregnancy outcome.

Demographics and outcome

	Group 1	Group 2	P value
Multiparous	70.2 %	70.2%	1.000
BMI	28.3	27.9	0.5910
weight gain	18.7 lb	19.2 lb	0.6617
GA (wks) delivery	39.0	38.7	0.0788
BW (gm)	3260	3253	0.7852
BW > 4000 gm (%)	4.5	4.9	0.8055
GA (wks)at diagnosis	27.8	26.9	<0.0001
Treatment-medical (%)	43.9	22.1	<0.0001

248 Use of a broad-based intake screen for diabetes in pregnancy

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OBJECTIVE: Due to high rates of obesity and limited access to primary care, our obstetric patient population is at high risk for diabetes. In