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OBJECTIVE: Gestational diabetes mellitus (GDM) affects large-for-gestational-age and macrosomia that are associated with obstetrical and neonatal complications. However, neonatal outcome of appropriate-for-gestational-age (AGA) fetus from GDM pregnancy has not been fully understood. The purpose of this study is to evaluate the association between interval changes of fetal growth and neonatal outcome in AGA fetus of GDM pregnancy.

STUDY DESIGN: It was a retrospective case-control study of 660 singleton pregnancies with GDM in 4 tertiary care hospitals from 2006 to 2013 in Korea. We obtained clinical and fetal biometric parameters. Estimated fetal weight (EFW) was measured at the time of GDM diagnosis (2nd trimester) and within 2 weeks before delivery (3rd trimester). Both < 10th and >90th centile for gestation groups were excluded for including AGA. All measured EFWs were divided in four centile groups (10-25th, 25-50th, 50-75th and 75-90th centile for gestation). Interval changes of biometric parameters between 2nd and 3rd trimesters were determined. All included pregnancies were divided in three groups by change of centile; decrease, no change and increase groups. We evaluated obstetrical and neonatal outcomes such as cephalo-pelvic disproportion, macrosomia, low Apgar score, neonatal serum glucose and respiratory distress in three groups.

RESULTS: Neonatal serum glucose (p=0.009), incidence of hypoglycemia (p=0.012) and macrosomia (p< 0.001) were significantly different among three groups. Compared to centile decrease group, centile increase group showed low level of neonatal serum glucose (70.7 ± 1.03mg/dl vs 61.65 ± 4.06mg/dl, p=0.009), high incidence of hypoglycemia (odds ratio [OR] 2.559; 95% CI 1.266-5.172, p=0.007) and macrosomia (OR 7.839; 95% 3.272-18.781, p< 0.001).

CONCLUSION: In this study, excessive fetal growth within a range of AGA during GDM pregnancy represented neonatal low glycemic status and higher incidence of macrosomia. Therefore, even though EFW is included in AGA, consideration of serial growth pattern is necessary to evaluate neonatal outcome and predict macrosomia in GDM pregnancy.

274 Factors associated with rapid spontaneous preterm labor

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OBJECTIVE: Latency between presentation with threatened preterm labor (PTL) and eventual preterm birth (PTB) remains difficult to predict, but is of utmost importance for reasons including antenatal corticosteroid administration & resource/resuscitation planning. We sought to evaluate factors associated with rapid spontaneous PTL.

STUDY DESIGN: This is a cohort study using the NICHD Consortium on Safe Labor, which included women from 19 US hospitals, 2002-2008. Women with singleton, non-anomalous fetuses who delivered < 37 weeks' were included; those undergoing induction of labor for medical and/or fetal indications and those with contraindications to

vaginal delivery were excluded. Women were considered to have rapid spontaneous PTL if their cervix was ≥8 cm dilated at presentation, and/or if they delivered within 60 minutes of triage examination or admission, and/or if their labor progressed at a rate ≥ 5cm dilation/hour. We compared women with rapid PTL to those with slower PTL using chi-squared, t-test, and logistic regression as appropriate.

RESULTS: 13,805 women met inclusion criteria; 3,257 (23.6%) had rapid PTL. The mean delivery gestational age was similar in those with and without rapid PTL (34.1 ± 3.1 vs. 34.4 ± 2.8 weeks, p< 0.001), though those with rapid PTL were more likely to deliver < 28 weeks (6.6% vs. 5.2%, p=0.003). Population characteristics, stratified by rapid vs. slower PTL, are shown in Table 1. In adjusted models, multiple factors including a prior PTB, placental abruption, black race, and maternal education were associated with rapid PTL, Table 2.

CONCLUSION: Nearly 1 in 4 women with threatened PTL who eventually deliver < 37 weeks' gestation present with advanced cervical dilation, have rapid cervical change, and/or deliver within 60 minutes of arrival. Women with a prior PTB, placental abruption, and less than a high school education are at particularly high risk; in contrast, black women were less likely to have rapid PTL. Future refinement of models predicting rapid PTL may assist clinicians in better timing antenatal corticosteroids and resource allocation.

Table 1. Demographic, medical, and obstetric characteristics, stratified by rapid vs. slower PTL. Data are n(%) unless specified.

Characteristic	Rapid preterm labor N=3,257	Slower preterm labor N=10,548	p-value
Maternal age, mean years ± SD	26.9 ± 6.4	26.7 ± 6.4	0.083
Black race	949 (29.1)	2,938 (27.9)	0.155
Less than high-school education	166 (26.6)	843 (23.8)	0.136
Pre-pregnancy body mass index, mean kg/m ² ± SD	24.6 ± 5.9	25.1 ± 6.2	<0.001
Nulliparous	998 (30.6)	4,467 (42.4)	<0.001
Smoked during pregnancy	359 (11.0)	1,006 (9.5)	0.013
Previous preterm birth	758 (23.5)	1,701 (16.8)	<0.001
Cervical cerclage this pregnancy	27 (0.9)	96 (1.0)	0.681
Male fetus	1,673 (51.4)	5,789 (54.9)	<0.001
Chorioamnionitis	94 (2.9)	486 (4.6)	<0.001
Placental abruption	128 (3.9)	361 (3.4)	0.171
Delivered by cesarean section	280 (8.6)	2,382 (22.6)	<0.001

Table 2. Multivariable regression model results. Shown are factors associated with rapid PTL.

Characteristic	aOR	95% CI	P-value
Previous preterm birth	1.53	1.23-1.90	<0.001
Placental abruption	1.42	1.02-1.97	0.035
Less than high-school education	1.32	1.07-1.62	0.009
Male fetal gender	0.86	0.72-1.03	0.103
Black race	0.72	0.54-0.96	0.027
Cervical cerclage this pregnancy	0.52	0.20-1.32	0.170

*Other factors included in initial models were maternal smoking and chorioamnionitis, but were removed due to $p \geq 0.20$

275 Are Canadian cannabis dispensaries counselling pregnant women appropriately?

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OBJECTIVE: To determine and describe the recommendations or advice that dispensary employees are giving to pregnant women who are seeking treatment for nausea and vomiting during their first trimester. We hope to characterise the types of recommendations that are being offered to pregnant women in Canada.

Our primary outcome is the advice/ recommendation that the employee gives the caller. Essentially we wish to determine the proportion of licensed Canadian cannabis dispensaries that are recommending a cannabis product for use in pregnancy.

STUDY DESIGN: This is a nationwide cross-sectional study of licensed cannabis dispensaries. We will be using a mystery caller approach, which is legal under Canadian law. The caller stated they were 8 weeks pregnant and experiencing nausea and vomiting.

RESULTS: All 243 dispensaries contacted were licensed for recreational sale. Medical sale dispensaries were excluded. The majority, 93% (226/243), recommended against treatment of morning sickness with cannabis products. Recommendations against use were similar nationwide. Provinces where all dispensaries recommended against cannabis use are PEI, Ontario, Nova Scotia and Quebec. Most employees based their recommendation for use in pregnancy on store policy, personal opinion and feeling uncomfortable to give medical advice. Ultimately, majority of dispensaries recommended discussion with health care provider, healthcare resources and pharmacists. As more cannabis dispensaries open up across the country, we will continue to be contacting them.

CONCLUSION: Approximately 93% of Canadian cannabis dispensaries contacted recommended against using cannabis products for morning sickness in the first trimester. When asked about the safety of cannabis use in pregnancy, majority of employees were unsure, however proceeded to recommend against its use. As well, most of these dispensaries suggested asking a healthcare provider for more information without prompting. Despite the recent legalization of cannabis in Canada, it is evident that perceptions of the safety of

cannabis use during pregnancy have not been altered by the legislation.

276 Inpatient management protocol reduces racial disparity in treatment of severe maternal hypertension

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OBJECTIVE: Prompt treatment of severe maternal hypertension (systolic ≥ 160 mmHg or diastolic ≥ 110 mmHg for 15 minutes) is recommended within 60 min. Protocol based treatment reduces severe maternal morbidity (SMM). Non-Hispanic black women are at increased risk of SMM from preeclampsia. The effect of protocol based hypertension treatment on racial disparity is understudied. We examined the impact of protocol based treatment in black women.

STUDY DESIGN: This is a retrospective cohort study of women with severe maternal hypertension from 2015 to 2018. The primary outcome was acute treatment < 60 min, pre- vs post- 2016 protocol implementation. We compared demographics and SMM, between women treated < vs ≥ 60 min. Race was self-identified. Regression analysis incorporated factors including protocol implementation into a model to predict treatment < 60 min and SMM. Before entry, continuous variables were dichotomized for interpretability based on the value that was most discriminative on its receiver operating characteristic curve. Bootstrapping with 1000 repetitions was used for internal validation of area under the curve prediction model.

RESULTS: Of 552 women with sustained severe hypertension, 399 were black. Pre- protocol, 30.3% of black and 40.7% of non-black women were treated < 60 min ($p = 0.30$). Post-protocol, 57.6% of black and 61.1% of non-black women were treated < 60 min ($p = 0.54$). Treatment disparity between groups was reduced by 6.9% for black women ($p = 0.01$). Women with higher pre-treatment systolic and diastolic blood pressure and those treated post-protocol were more likely to be treated < 60 min (Table 1). In the regression, treatment post-protocol was the strongest predictor of treatment < 60 min (aOR 3.38 95% CI 2.16-5.29, Table 2). In a separate analysis, treatment < 60 min predicted reduction of SMM (aOR 0.47, 95% CI 0.24-0.91).

CONCLUSION: Inpatient management protocol reduced racial disparity in treatment times. Time to treatment < 60 min is associated with reduced SMM, protocol driven treatment may potentially reduce morbidity related to severe hypertension in black women.