

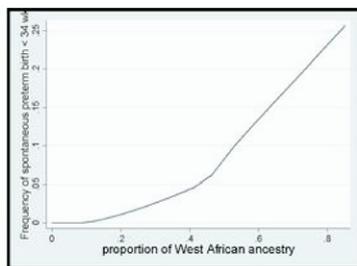
**126 MATERNAL AND NEWBORN WEST AFRICAN GENETIC ANCESTRY AND THE RISK OF EARLY SPONTANEOUS PRETERM BIRTH** HYAGRIV SIMHAN<sup>1</sup>, LISA BODNAR<sup>1</sup>, LAUREL PEARSON<sup>2</sup>, MARK SHRIVER<sup>2</sup>, MARIJANE KROHN<sup>1</sup>, <sup>1</sup>University of Pittsburgh, Pittsburgh, Pennsylvania, <sup>2</sup>Pennsylvania State University, Pennsylvania

**OBJECTIVE:** Knowing the proportion of an individual's genetic ancestry that is derived from different parental populations and geographic places can be useful for identifying genetic and environmental factors—by reducing false-negative associations and uncovering true associations—that underlie common diseases for which risk varies among populations. Our objective was to describe the genetic ancestry of women and their newborns and to determine the relation of maternal and newborn genetic ancestry with the risk of early spontaneous preterm birth and of funisitis.

**STUDY DESIGN:** We genotyped 245 women and their newborns in this prospective cohort for 100 Ancestry Informative Markers chosen to distinguish parental populations. The primary outcome was spontaneous preterm birth < 34 weeks. Candidate covariates included inter-pregnancy interval, tobacco use, drug use, payer status, education, household income, maternal medical problems, bacterial vaginosis, Neisseria gonorrhoeae, Chlamydia trachomatis, and Trichomonas vaginalis. All placentae were examined by a single placental pathologist blinded to clinical parameters.

**RESULTS:** Among 134 black women, median West African ancestry was 86% (20% to 99%) Among 111 white women, median European ancestry was 80% (14% to 100%). Among newborns of white women, there was a statistically significant positive association between the proportion of newborn West African ancestry with the risk of spontaneous preterm birth < 34 weeks, after adjusting for important covariates (p=0.02). There was also a statistically significant relation between West African ancestry among babies of black women and the risk of funisitis (p=0.04).

**CONCLUSION:** There is an increased risk of early spontaneous preterm birth and funisitis with increasing West African ancestry among newborns of white women.



#### Proportion of West African ancestry and the frequency of SPTB < 34 weeks

0002-9378/\$ - see front matter  
doi:10.1016/j.ajog.2008.09.153

**127 LATE PRETERM BIRTHS INFANTS: A SERIOUS NATIONAL PUBLIC HEALTH PROBLEM** ALICIA FLICK<sup>1</sup>, ANA HERNANDEZ<sup>1</sup>, LESLEY DE LA TORRE<sup>1</sup>, ADRIAN MARIMON<sup>1</sup>, HUMBERTO ELEJALDE<sup>1</sup>, AMANDA COTTER<sup>1</sup>, VICTOR GONZALEZ-QUINTERO<sup>1</sup>, <sup>1</sup>University of Miami School of Medicine, Obstetrics and Gynecology Division of Maternal Fetal Medicine, Miami, Florida

**OBJECTIVE:** "Late preterm birth infants" have higher risks for mortality and morbidity compared with term infants. The objective of this study is to compare pregnancy outcomes and neonatal morbidity between infants born between 34-36 weeks (LPTB) to 37-42 weeks (TERM) of gestation using 2004 CDC national birth registry

**STUDY DESIGN:** A secondary analysis was performed using data from the 2004 National Center for Health Statistics natality birth computerized statistical files. Data is processed per state and then submitted to the National Center for Health Statistics, who later publishes the data. Data have been coded according to uniform coding specifications, have passed rigid quality control standards, have been edited and reviewed and are the basis for official US births statistics. Data was stratified into two groups; I. LPTB (34-36/6/7 weeks) and II. TERM (37-42 weeks). Maternal demographics and pregnancy complications were analyzed. Neonatal variables included the following: rates of Respiratory Distress Syndrome (RDS), 5 min APGAR score < 7, assisted ventilation and neonatal seizures. A composite neonatal morbidity consisted of one or more of the above complications

**RESULTS:** A total of 213,565 LPTB occurred in 2004 in the US. Women in the LPTB group had higher rates of hypertension, preeclampsia and preterm premature rupture of membranes when compared to women in the TERM group. The neonatal composite morbidity was significantly higher in late PTB group than in the term group (8.9% vs. 3.3%, p < 0.001). Infants in the LPTB were more likely to have RDS, (AOR 5.3, 95th CI 5.0-5.5), assisted ventilation (AOR 3.7, 95th CI 3.6-3.9) and 5 min Apgar score < 7 (AOR 1.6, 95th CI 1.5-1.7).

**CONCLUSION:** Neonatal morbidity is significantly higher among infants among LPTB, particularly RDS. Increased awareness of LPTB among obstetricians and new strategies for its reduction must be a priority.

0002-9378/\$ - see front matter  
doi:10.1016/j.ajog.2008.09.154

**128 SHORT CERVIX AND NEGATIVE FETAL FIBRONECTIN: LOW RISK OF DELIVERY WITHIN 2 WEEKS OF SCREENING** ISAAC SASSON<sup>1</sup>, ELIZABETH WESTERLUND TRICHE<sup>2</sup>, HUMBERTO AZPURUA<sup>3</sup>, MICHAEL ROMANO<sup>3</sup>, MICHAEL PAIDAS<sup>4</sup>, <sup>1</sup>Yale University School of Medicine, Department Obstetrics, Gynecology and Reproductive Sciences, New Haven, Connecticut, <sup>2</sup>Yale University School of Medicine, Department Epidemiology, New Haven, Connecticut, <sup>3</sup>Yale University School of Medicine, Department Obstetrics, Gynecology, and Reproductive Sciences, New Haven, Connecticut, <sup>4</sup>Yale University School of Medicine, Department Obstetrics, Gynecology, and Reproductive Sciences, Yale Women and Children's Center for Blood Disorders, New Haven, Connecticut

**OBJECTIVE:** Few reports exist regarding the performance of sonographic cervical length (CL) & Fetal Fibronectin (FFN) in patients (pts) at risk for PTB when CL is short (<2.5cm) & FFN is neg. We use a screening strategy in pts at high risk for PTB; obtain an FFN swab prior to CL, & only perform FFN screen if CL is <2.5cm; routinely administer a course of corticosteroids for pts at 24-34wks, with temporary tocolysis for contractions.

**STUDY DESIGN:** In this retrospective study, we evaluated the time to delivery interval in all pts who had a CL and FFN within 24 hrs of CL in the University Obstetric Service. Using medical record review, we searched all pts having both CL and FFN result from 8/7/04 to 3/15/08. We identified 423 pts who met criteria for study. After excluding pts with multiple gestation, cerclage, & indicated delivery, we identified 114 singleton gestations with CL <2.5cm & FFN neg. If a pt delivered >1 time during the study period, only first pregnancy was used. For pts with multiple results, only the first CL and FFN results were evaluated. We analyzed the data using chi-square test, with significance set at p < 0.05.

**RESULTS:** Of 114 pts with CL <2.5cm & FFN neg, 2 & 3 pts delivered < 7 days and <14 days of screening, resp. With FFN neg, the mean +/- SD time to delivery from CL <2.5cm (n=114), was 63 +/- 28 days; CL <1.5cm (n=25): 66 +/- 23 days; CL <0.5cm (n=4), 80 +/- 12 days respectively.

**CONCLUSION:** Patients at risk for PTB who have a short cervix and negative FFN are very unlikely to deliver within 14 days of screening. Antenatal steroid administration in patients at high risk for PTB with a short cervix (CL <2.5cm) and with a negative FFN should be reconsidered.

Results Table - Rate of Pre term delivery (%)

GA first at FFN & CL (# pts)	Deliv <14d; n (%)	Deliv <37w; n (%)
22 to < 24 wk (13)	0 (0%)	8 (61.5%)
24 to < 28 wk (43)	2 (4.6%)	18 (41.8%)
28 to < 32 wk (46)	1 (2.2%)	22 (47.8%)
32 to < 34 wk (12)	1 (8.3%)	3 (25%)
Total (114)	4 (3.5%)	51 (44.7%)

0002-9378/\$ - see front matter  
doi:10.1016/j.ajog.2008.09.155

**129 EARLY VERSUS LATE ADMISSION TO LABOR/DELIVERY, LABOR PROGRESS AND RISK OF CAESAREAN SECTION IN NULLIPAROUS WOMEN** RAFAEL MIKOLAJCZYK<sup>1</sup>, JUN ZHANG<sup>2</sup>, LINDA CHAN<sup>3</sup>, JAGTESHWAR GREWAL<sup>4</sup>, <sup>1</sup>School of Public Health, University of Bielefeld Germany and Eunice Kennedy Shriver National Institute of Child Health and Human Development, Rockville, Maryland, <sup>2</sup>Eunice Kennedy Shriver National Institute of Child Health and Human Development, Epidemiology Branch, Bethesda, Maryland, <sup>3</sup>Naval Medical Center San Diego, Obstetrics and Gynecology, California, <sup>4</sup>Eunice Kennedy Shriver National Institute of Child Health and Human Development, Epidemiology Branch, Maryland

**OBJECTIVE:** To examine whether early versus late admission to labor/delivery is associated with labor progress and risk of cesarean section (CS).

**STUDY DESIGN:** We examined data on 1,329 nulliparous women with singleton vertex pregnancies and spontaneous labor onset. We selected three groups based on cervical dilation at admission: early (0.5-1.5 cm, N=178), intermediate (2.5-3.5 cm, N=320) and late (4.5-5.5 cm, N=175). Kaplan-Meier estimator of the incidence (adjusting for the censoring) was used for the analysis of interventions while random effects regression with splines was used for the assessment of labor progress.

**RESULTS:** Women who were admitted to labor early were more likely to use oxytocin (77% versus 30% in late admission group) and had a higher risk of CS (18% versus 4%), while the risk of instrumental delivery did not differ (24% versus 24%). Before 4 cm dilatation, the earlier a woman was admitted to labor the higher her risk of CS was in a linear relationship. However, after 4 cm, the relationship disappeared. These patterns were true for both first and second stage CS. Once a woman who was admitted before 4 cm dilatation reached 5 cm without experiencing CS, she had a similar risk of CS as women who were admitted at 4.5-5.5 cm. Receiving oxytocin at an earlier stage of labor was associated with a higher risk of CS. Women admitted early had a longer duration of labor, but after 4 cm dilatation, their labor progressed faster than women who were admitted after 4 cm.

**CONCLUSION:** Early admission to labor/delivery was associated with longer labor and a significantly higher risk of CS. It remains to be elucidated whether this association was due to some underlying pathophysiology of dystocia or excessive intervention by physicians, or both. Understanding of this association may improve the strategy for reducing CS.

0002-9378/\$ - see front matter  
doi:10.1016/j.ajog.2008.09.156