

5 INTERCEPTIONAL ANTIBIOTICS TO PREVENT SPONTANEOUS PRETERM BIRTH (SPTB): A RANDOMIZED TRIAL WILLIAM ANDREWS¹, ROBERT GOLDENBERG¹, JOHN HAUTH¹, SUZANNE CLIVER¹, ¹University of Alabama at Birmingham, Obstetrics/Gynecology, Birmingham, AL

OBJECTIVE: We hypothesized that upper genital tract microbial infection associated with SPTB may precede conception. Our objective was to determine if antibiotic administration during the interpregnancy interval in non-pregnant women with a prior early (<34 wks') SPTB would reduce the rate of SPTB in the subsequent pregnancy.

STUDY DESIGN: Women with an SPTB <34 wks' gestational age (GA) were randomized at 3 months post partum to receive oral azithromycin 1 gram x 2 (4 days apart) plus sustained-release metronidazole 750mg QD x 7 days or identical placebo. This regimen was repeated every 4 months until conception of another pregnancy. Outcomes of the subsequent pregnancy were assessed.

RESULTS: A total of 241 women were randomized and 134 conceived a subsequent pregnancy. Of these, 3 were lost to follow-up and 7 had elective terminations. Thus, 124 women were available for study: 59 in the active drug and 65 in the placebo group. There was no significant difference between the groups for maternal age, ethnicity, education, tobacco use, marital status, delivery GA of prior pregnancy, days between delivery and randomization, days between last treatment to subsequent conception, or interpregnancy interval duration (520 ± 409 vs 540 ± 373 days, *P* = .790). In the active drug vs placebo group, neither subsequent SPTB (<37 wks: 62% vs 55%, *P* = .515; <35 wks: 46% vs 32%, *P* = .136; <32 wks: 35% vs 25%, *P* = .274) nor miscarriage (<15 wks: 12% vs 14%, *P* = .742) were significantly different. Although not statistically significant, mean delivery GA in the subsequent pregnancy was 2.4 wks earlier in the active drug vs placebo group (32.0 ± 7.9 vs 34.4 ± 6.3 wks, *P* = .082) and mean birthweight was significantly lower in the active drug group (1989 ± 1199 vs 2464 ± 1067 g, *P* = .032).

CONCLUSION: Intermittent treatment with metronidazole and azithromycin of non-pregnant women with a recent early SPTB does not significantly reduce subsequent SPTB but rather may be associated with a lower delivery GA and lower birthweight.

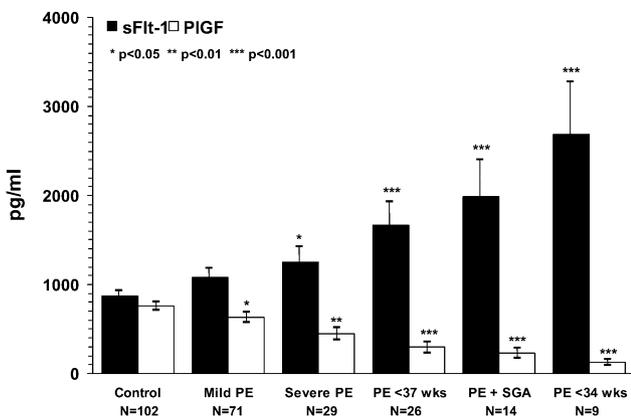
6 ACUTE RISE IN CIRCULATING sFlt-1 MAY HERALD PREECLAMPSIA RICHARD LEVINE¹, SHARON MAYNARD², CONG QIAN³, KEE-HAK LIM², LUCINDA ENGLAND¹, KAI YU¹, ENRIQUE SCHISTERMAN¹, RAVI THADHANI⁴, BENJAMIN SACHS², FRANKLIN EPSTEIN², BAHA SIBAI⁵, VIKAS SUKHATME², ANANTH KARUMANCHI², ¹NICHD/DHHS, Epidemiology & Biometry, Bethesda, MD ²Beth Israel Deaconess Medical Center, Medicine, Obstetrics & Gynecology, Boston, MA ³Allied Technology Group, Rockville, MD ⁴Massachusetts General Hospital, Medicine, Boston, MA ⁵University of Cincinnati, Obstetrics & Gynecology, Cincinnati, OH

OBJECTIVE: Preeclampsia (PE) may be caused by excess circulating sFlt1, a soluble receptor, which binds PlGF and VEGF. To evaluate this, we measured serum concentrations in a nested case-control study within the CPEP trial cohort.

STUDY DESIGN: Subjects were healthy nulliparas with complete outcome information, baseline serum obtained at <22 wks, and a male infant. Each PE case was matched to one normotensive control. 120 pairs were randomly chosen for analysis of all 657 specimens obtained before labor. Total sFlt1 and free PlGF were measured by ELISA.

RESULTS: sFlt1 rose 5 wks before PE, reaching levels 3-fold higher than GA-matched controls by onset of PE. PlGF in cases was less than in controls from 13-16 wks GA and dropped further in the 5 wks before PE. Alterations in sFlt1 and PlGF correlated with PE severity, earlier onset, and presence of SGA. At 8-20 wks women with PlGF in the lowest quartile of controls had 11-fold greater risk of PE at <34 wks (*P* < .05) than those in higher quartiles.

CONCLUSION: Preeclampsia is associated with increased sFlt1 5 wks before clinical disease and with decreased PlGF from 13-16 wks GA. These findings lend support to an important etiologic role for sFlt1 and PlGF in preeclampsia.



sFlt-1 and PlGF at 23-32 Weeks by Preeclampsia Status and Severity

7 OUTCOMES OF CHILDREN AT 2 YEARS OF AGE IN THE TERM BREECH TRIAL HILARY WHYTE¹, MARY HANNAH², SAROJ SAIGAL³, TERM BREECH TRIAL COLLABORATIVE GROUP⁴, ¹Hospital for Sick Children, Paediatrics, Toronto, Ontario, Canada ²University of Toronto, Obstetrics and Gynaecology, Toronto, Ontario, Canada ³McMaster University, Paediatrics, Hamilton, Ontario, Canada ⁴University of Toronto, MIRU, Toronto, Ontario

OBJECTIVE: The Term Breech Trial found a significant reduction in risk of adverse perinatal/neonatal outcome with planned cesarean section compared with planned vaginal birth for the singleton fetus in breech presentation at term. It is uncertain if planned method of delivery also affects outcomes of children later in life. We followed infants enrolled in the Term Breech Trial to assess neurodevelopmental outcomes at 2 years of age.

STUDY DESIGN: At 85 centers, in 18 countries, 923 of 1159 (79.6%) children were followed to 2 years of age. The Ages and Stages Questionnaire (ASQ) was used to screen for abnormalities in the first instance. If the ASQ was abnormal, the children underwent a neurodevelopmental assessment by a trained professional. The primary outcome was death or an abnormal neurodevelopmental outcome at 2 years of age.

RESULTS: Three children were excluded in the planned vaginal birth group because of Down syndrome, leaving 457 in the planned cesarean section group and 463 in the planned vaginal birth group for assessment of outcomes. Eight children died (2 in the planned cesarean section group; 6 in the planned vaginal birth group). The risk of death or abnormal neurodevelopmental outcome was not different for the planned cesarean section and the planned vaginal birth groups (14 [3.1%] vs 13 [2.8%], relative risk [95% CI]: 1.09 [0.52-2.30], *P* = 0.85; risk difference [95% CI]: +0.3% [-1.9%, +2.4%]).

CONCLUSION: Planned cesarean section is not associated with a large reduction in risk of death or abnormal neurodevelopmental outcome of children at 2 years of age. The effect of planned method of delivery on important but smaller reductions in risk remains uncertain.

8 THE MFUM CESAREAN REGISTRY: TRIAL OF LABOR AFTER PRIOR CESAREAN DELIVERY: MATERNAL AND PERINATAL OUTCOME MARK B LANDON¹, ¹for the NICHD MFUM Network, Bethesda, MD

OBJECTIVE: To evaluate whether trial of labor (TOL) is associated with increased maternal or perinatal risk in women with a prior cesarean delivery (CD).

STUDY DESIGN: A prospective four-year (1999-2002) observational study at 19 academic centers of all women with singleton gestation and prior CD. All charts were reviewed by trained research nurses. Women attempting vaginal birth after cesarean (VBAC) were compared to women with elective repeat cesarean delivery (ERCD) without labor and no other indication for CD.

RESULTS: Of 45,981 women with a prior CD, 15,800 underwent ERCD and 17,931 attempted VBAC. 12,250 women had other maternal or fetal indications for a repeat CD. The TOL rate was 39% and the VBAC success rate was 73%. Symptomatic uterine rupture occurred in 140 (0.78%) of TOL cases. Maternal complications (endometritis, transfusion) as well as the frequency of term infants with hypoxic ischemic encephalopathy (HIE) were increased in TOL versus ERCD (see table).

CONCLUSION: When compared to elective repeat cesarean delivery, women attempting VBAC are at increased risk for maternal morbidity (uterine rupture, endometritis, transfusion) and newborn HIE. Trial of labor remains an option as the absolute risk for these complications is small.

Maternal and Perinatal Outcome

	TOL N(%)	ERCD N(%)	RR (95% CI)	<i>P</i>
Uterine rupture	140/17929 (0.78)	0/15793 (0.0)	—	<0.0001
Hysterectomy	41/17929 (0.23)	47/15793 (0.30)	0.77 (0.51-1.17)	0.2158
DVT/PE	7/17898 (0.04)	10/15773 (0.06)	0.62 (0.23-1.62)	0.3222
Transfusion	307/17930 (1.7)	158/15794 (1.0)	1.71 (1.41-2.07)	<0.0001
Endometritis	518/17930 (2.9)	284/15793 (1.8)	1.61 (1.39-1.85)	<0.0001
Maternal death	3/17929 (0.02)	7/15793 (0.04)	0.38 (0.10-1.46)	0.2055
Term intrapartum stillbirth	7/15336 (0.05)	3/15014 (0.02)	2.28 (0.59-8.83)	0.3439
Term neonatal death	12/15293 (0.08)	6/14997 (0.04)	1.96 (0.74-5.22)	0.1697
Term HIE	14/15288 (0.09)	1/14993 (0.01)	13.73 (1.81-104.40)	<0.001