108 Trial of labor after cesarean: Maternal and neonatal outcomes from the Consortium on Safe Labor
Jaclyn M. Phillips1, Richard Amdur2, Homa K. Ahmadiana1
1University of Pittsburgh School of Medicine, Washington, DC, 2The George Washington University School of Medicine and Health Sciences, Washington, DC

OBJECTIVE: To evaluate maternal and neonatal morbidity and mortality in patients undergoing trial of labor after cesarean (TOLAC) using a more contemporary data set.

STUDY DESIGN: This was a secondary analysis of the Consortium on Safe Labor database, a retrospective cohort study from 2002 to 2008. Women met inclusion criteria for our study if they had a history of any prior cesarean delivery (CD). Perinatal outcomes such as uterine rupture, uterine dehiscence, blood transfusion, hemorrhage, hysterectomy, endometritis, maternal death, neonatal intensive care unit (NICU) admission, neonatal respiratory distress syndrome, neonatal seizure, and neonatal death were evaluated based on desired delivery mode (planned elective CD or TOLAC). Multivariable logistic regression was used to describe the association between TOLAC and mode (planned elective CD or TOLAC).

RESULTS: Of 9,858 patients who had a prior CD, our study population had 4,400 patients (44.6%) who desired TOLAC and 5,458 patients (55.4%) who underwent elective repeat CD. Of 4,400 patients who desired trial of labor, 3,162 (72%) achieved a vaginal birth. Women who attempted TOLAC compared to those who had an elective CD were more likely to have uterine rupture (OR 3.11; 95% CI 1.21–8.02), hemorrhage (OR 2.24; 95% CI 1.86–2.70), and blood transfusion (OR 2.33; 95% CI 1.70–3.19) (Table 1). Rate of uterine rupture was higher in patients undergoing TOLAC (0.34%), however it was still described in patients undergoing elective CD (0.11%). Rate of NICU admission was higher in patients undergoing TOLAC compared to elective CD (12.9% and 11.3% respectively (OR 1.17; 95% CI 1.03–1.32).

CONCLUSION: Patients undergoing TOLAC are two-times more likely to have a hemorrhage or require blood transfusion compared to women with elective repeat cesarean delivery. Compared to the Cesarean Registry data, women have half the rate of uterine rupture and a 30% higher risk for blood transfusion.

Anika Toma1, Eyal Sheiner2, Tamar Wainstock3
1Soroka Hospital, Beer Sheva, Israel, 2Department of Obstetrics and Gynecology, Soroka University Medical Center, Faculty of Health Science, Ben-Gurion University of the Negev, Beer Sheva, Israel, 3Ben-Gurion University of the Negev, Department of Epidemiology and Health Services Evaluation, Beer Sheva, Israel

OBJECTIVE: Anemia of pregnancy, defined as hemoglobin (Hb) concentration less than 11 g/dL during pregnancy, is associated with immediate adverse obstetric outcomes such as low birth weight and preterm delivery. Our objective was to evaluate a possible association between anemia during pregnancy and long-term infectious morbidity of the offspring.

STUDY DESIGN: A population-based retrospective study was conducted, comparing women with hemoglobin (Hb) values above and below 11 g/dL. Incidence of long-term pediatric hospitalizations due to various infectious diseases was compared between the two groups. The study population included all singleton born in a tertiary medical center between 1991-2014, including 224,490 infants.

A Kaplan-Meier survival curve was constructed to compare cumulative infectious morbidity, and a Cox regression model was used to control for confounders.

RESULTS: The study included 224,490 newborns; 117,999 (52.6%) infants were born to mothers with anemia. The rate of infectious morbidity leading to hospitalizations was significantly higher in infants to anemic mothers (11.8% vs. 11.3%, OR = 1.1, CI 1.03-1.08, p < 0.0001, Table). Specifically, anemia during pregnancy was significantly associated with respiratory infections (6.1% vs. 5.7%, OR = 1.07, CI 1.03-1.11, p < 0.0001). The Kaplan-Meier survival curve showed a significantly increased cumulative risk for hospitalizations due to infectious disease in offspring to anemic mothers (log rank p < 0.0001, Figure). When controlling for confounders such as gestational age, maternal age and maternal smoking, using the Cox proportional hazards model, anemia of pregnancy was noted as an independent risk factor for long-term infectious morbidity of the offspring (adjusted HR = 1.1, 95% CI 1.06-1.11, p < 0.001).

CONCLUSION: Anemia during pregnancy may influence offspring susceptibility to pediatric infections, as it was found to be an independent risk factor for long-term infectious morbidity of the offspring. Our findings expand the knowledge about the impact of maternal anemia on future child health.