

delivery was not related to frequency of contractions or presence of DAT. However, GA at the time of any trauma was positively associated with GA at delivery ($r^2=0.02$, $p=0.029$) even after adjusting for confounders. Fetal monitoring for >4 hrs or ≤ 4 hrs had no effect on composite adverse outcome.

CONCLUSION: Pregnant women with trauma involving DAT have a higher frequency of contractions for at least 4hrs post-trauma than those without abdominal injury. However, this is not associated with an increase in adverse perinatal outcomes. Trauma occurring earlier in pregnancy regardless of DAT led to earlier delivery, suggesting either an underlying predisposition or a direct adverse effect on pregnancy longevity.

788 Day and time of deliveries among home births

Amos Grunebaum, Frank Chervenak

Weill Cornell Medicine, New York, NY



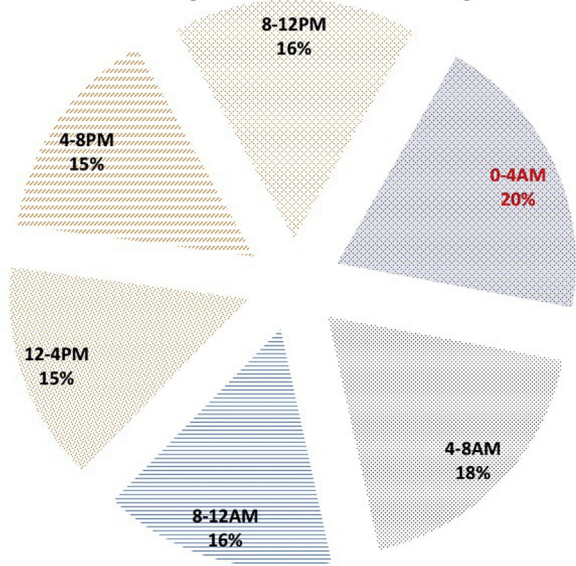
OBJECTIVE: The weekday and time of childbirth after spontaneous labor is an important aspect of information on the physiology of labor. In hospitals, day and time of delivery is affected by many aspects such as scheduling staff availability, and other issues, while home births are not affected by these issues. The objective of this study was to assess weekday and time of deliveries at home births.

STUDY DESIGN: Review of the 2014 United States natality files for home births. We assessed the distribution for each weekday as well as the time of delivery in 4-hour segments.

RESULTS: On days of the week home birth deliveries were about equally distributed from a low of 14.1% of births on Sundays and Monday, to a high of 14.4% on Thursdays and Saturdays. There was a significantly increased of deliveries between 0-4 AM (19.6%; OR 1.32, 95% CI 1.26-1.37) and 4 AM to 8 AM (18.6%; OR 1.23 95%CI 1.18-1.29) while the lowest proportion of deliveries occurred between 4-8 PM (14.7%; OR 0.93 95%CI 0.89-0.97).

CONCLUSION: With many labors in hospital either being induced, stimulated, scheduled either for inductions or cesarean deliveries, home births provide an excellent window into the physiology of naturally occurring labor. In our study, deliveries at home births were about equally distributed among the 7 days of the week, and there was a significant increase of deliveries between midnight and 8 AM. Further studies should be done to find the cause of why deliveries after spontaneous labor are more likely to occur between midnight and 8 AM than at other times.

Distribution of Home Birth Deliveries By Time of the Day



789 Comparison of rapid immunoassays for the detection of ruptured membranes

Irogue Igbinosa¹, F. A. Moore¹, Jon E. Block²

¹LSU School of Medicine, Baton Rouge, LA, ²Independent Clinical Consultant, San Francisco, CA



OBJECTIVE: Spontaneous rupture of membranes (ROM) before the onset of uterine contractions is a common diagnostic problem in obstetrical practice. Timely detection of ROM is vital to support gestational age-specific interventions to optimize perinatal outcomes and minimize the risk of serious complications such as preterm delivery, fetal distress and maternal/fetal infections. Compare diagnostic performance of two rapid bedside immunoassay tests designed to detect amniotic fluid proteins in cervicovaginal fluids.

STUDY DESIGN: In this prospective observational study, two commercially-available immunoassay tests (ROM Plus®, AmniSure®) were evaluated concurrently in 111 pregnant patients who presented with probable ROM. Immunoassay results were compared to clinical confirmation via comprehensive clinical chart review. Diagnostic performance characteristics were calculated including sensitivity, specificity, positive predictive value (PPV), negative predictive value (NPV).

RESULTS: Overall, diagnostic performance characteristics were similar between ROM Plus® and AmniSure®, respectively: sensitivity (96.4% and 89.3%), specificity (98.8% and 100%), PPV (96.4% and 100%), NPV (98.8% and 96.5) and accuracy (98.2% and 97.3%). For term patients (≥ 37 weeks gestation), the sensitivities were 93.8% and 81.3% and specificities were 97.1% and 100% for ROM Plus® and AmniSure®, respectively. For preterm patients (< 37 weeks gestation), both immunoassay tests provided exact concordance with clinical confirmation of ROM resulting in 100% diagnostic accuracy.

CONCLUSION: Both rapid immunoassay tests provided similarly diagnostic accuracy for the rapid detection of ROM with only two discrepant results for ROM Plus® and three discrepant results for

AmniSure® compared to clinical confirmation. The findings from this study recommend these tests for patients presenting with suspected ROM to guide correct clinical management decisions to improve obstetrical and neonatal outcomes.

TRIAL REGISTRATION: NCT02208011

KEYWORDS: ROM Plus®, AmniSure®, premature rupture of membranes, point of care immunoassay, insulin-like growth factor binding protein (IGFBP-1), alpha-fetoprotein (AFP), placental alpha microglobulin-1 (PAMG-1).

790 Composite maternal morbidity in morbidly adherent placenta: a tale of two worlds



Alejandro G. Mora¹, Oscar A. Viteri², I-Li Huang³, Tana C. Lasso⁴, David E. Pastor⁴, Baha M. Sibai², Suneet P. Chauhan²

¹Hospital Gineco-Obstétrico Isidro Ayora, Quito, Ecuador, ²Dept. OB/GYN McGovern Medical School at UTHealth, Houston, TX, ³Universidad San Francisco de Quito, Quito, Ecuador, ⁴Pontificia Universidad Católica del Ecuador, Quito, Ecuador

OBJECTIVE: Similar to the US, the rate of morbidly adherent placenta (MAP) is increasing in developing countries. Our objective was to compare the composite maternal morbidity (CMM) among women with MAP delivered in Ecuador vs in the US Maternal-Fetal Medicine Units Network (MFMU) centers.

STUDY DESIGN: This was a historical comparison of women in Ecuador who delivered at a tertiary center (Hospital Gineco-Obstétrico Isidro Ayora [HGOIA], 2010-2015) vs those in the MFMU cesarean registry (CR; 1999-2002). MAP was defined as surgical and/or pathological confirmation of either placenta accreta, increta or percreta. Our primary outcome was CMM, comprised of: operative injury, postoperative ileus, blood transfusion >10 units, ICU admission, length of stay >4 days or maternal death. Multivariate logistic regression was performed to control for discordant variables on univariate analysis: maternal age, body mass index (BMI), race, number of prior cesarean deliveries (CD), smoking, gestational diabetes (GDM) and planned vs emergent CD. Adjusted odds ratios (aOR), with 95% confidence intervals (CI) were reported for outcomes of interest.

RESULTS: Of the 48,395 women delivered at HGOIA, 119 (0.2%) were diagnosed with MAP. Similarly, of the 73,247 pregnancies in the MFMU-CR, 196 (0.3%) had MAP. Women from the MFMU CR were more likely to be older, Caucasian, smokers, have a higher BMI, ≥1 prior CD, and higher rates of GDM. MFMU-CR women were also more likely to have severe MAP (increta: 30 vs 5% and percreta: 20 vs 8%, p<0.001). After logistic regression, there were no differences in the rate of CMM between the groups (82 vs 70%; aOR 1.01, 95%CI 0.94-1.08). In a subgroup analysis of those requiring hysterectomy, the rate of CMM was also similar (Table).

CONCLUSION: Despite the shortcomings of historical comparison, our findings suggest that incidence of MAP and CMM in a developing country and MFMU Centers are similar. A confirmatory, adequately powered study is needed to ascertain these findings.

Table. Maternal Outcomes in Women Requiring Hysterectomy

	HGOIA Cohort (N = 69)	MFMU CR Cohort (N = 147)	P Value	aOR (95% CI)
Need for blood transfusion	61 (88)	52 (35)	<0.001	1.05 (0.96-1.1)
Any wound infection	3 (4)	4 (3)	0.68	0.86 (0.66-1.11)
Composite maternal morbidity*	58 (84)	114 (78)	0.27	1.00 (0.90-1.11)
Length of stay > 4 days	53 (77)	99 (67)	0.16	0.95 (0.87-1.05)
Transfusion > 10 units	1 (1)	20 (14)	0.003	0.98 (0.84-1.14)
Operative injury**	4 (6)	27 (18)	0.01	1.14 (1.00-1.30)
Ileus	1 (1)	11 (8)	0.11	0.84 (0.69-1.04)
Thromboembolism	0 (0)	2 (1)	1.00	-
ICU admission	14 (20)	53 (36)	0.02	1.02 (0.92-1.14)
Maternal death	4 (6)	1 (1)	0.04	0.95 (0.75-1.20)

Data presented in N (%) unless otherwise indicated

Abbreviations: ICU = intensive care unit

*Includes any of the following: length of stay > 4 days, blood transfusion > 10 units, operative injury, postoperative ileus, thromboembolism, ICU admission or maternal death

**Includes: bowel injury, cystotomy, ureteral injury
Analysis adjusted for: maternal age, BMI, ethnicity, number of prior cesarean deliveries, smoking, gestational diabetes and emergency delivery.

791 General vs neuraxial anesthesia for cesarean hysterectomy: a secondary analysis



Mallory Hoffman, Oscar Viteri Molina, Claudia Pedroza, Suneet Chauhan, Baha Sibai

Dept. OB/GYN McGovern Medical School at UTHealth, Houston, TX

OBJECTIVE: The optimal method of anesthesia for cesarean hysterectomy (C-Hyst) due to morbidly adherent placenta (MAP) is uncertain. The objective of this study was to compare maternal and neonatal composite morbidity between planned neuraxial vs general anesthesia in women undergoing a cesarean hysterectomy for MAP.

STUDY DESIGN: A secondary analysis of the MFMU cesarean registry database (Landon, NEJM 2004) was performed. Group 1 were women who had C-Hyst for MAP under general anesthesia; Group 2, women with planned neuraxial anesthesia. The two primary outcomes were: 1) composite maternal morbidity (CMM) comprised of any of the following: admission to ICU, blood transfusion ≥4 units PRBCs, ureter or bowel injuries, or maternal death; and 2) composite neonatal morbidity (CNM) included any of the following: respiratory distress syndrome, mechanical ventilation, transient tachypnea of the newborn, sepsis, or death. Multivariate logistic regression adjusted for the following confounders: ethnicity and planned delivery, and gestational age at delivery. Adjusted odds ratio (aOR) and 95% confidence intervals (CI) were reported.

RESULTS: Among 73,257 women in the database, 133 (0.2%) had a C-Hyst for MAP. There were 54 (41%) women in Group 1 and 79 (59%) in Group 2. Baseline demographics are shown in Table 1. Significant differences were noted in ethnicity, with African American patients more likely to have neuraxial anesthesia and Caucasian patients more likely to receive general anesthesia (p=.03). Planned deliveries were more likely to receive regional anesthesia (p=.03). After adjusting for significant differences in baseline demographics, no differences were noted in CMM or CNM between groups, shown in Table 2.

CONCLUSION: Composite maternal and neonatal morbidities were similar between the two groups. Until an adequately powered study is done on the topic, the decision to use general vs neuraxial anesthesia should be based on provider's and woman's preference.