316 TRANSVAGINAL ULTRASOUND FINDINGS AND MODE OF DELIVERY IN PLACENTA PREVIA PATRIZIA VERGANI[1], ILARIA POZZI[1], SARA ORNAGHI[1], MASSIMILIANO GRECO[1], FRANCESCA MARIA RUSSO[1], ILARIA FOLLESA[1], [1]University of Milano-Bicocca, Department of Obstetrics and Gynecology, Monza, Milan, Italy

OBJECTIVE: There is consensus that a placenta previa that totally or partially overlies the internal os requires delivery by caesarean, however the mode of delivery when the placenta lies in proximity to the internal os is more controversial. Three retrospective studies concluded that a placental edge-os distance greater than 20 mm permitted a safe vaginal delivery. Conversely there is no concordance about the treatment of women with a placental edge-os distance between 0 and 20 mm. We have related transvaginal ultrasound findings with mode of delivery and outcomes in cases of complete or partial placenta previa.

STUDY DESIGN: Retrospective review of 114 consecutive singleton pregnancies with placenta previa confirmed by a transvaginal ultrasound performed at <28 days of delivery. Excluded were cases with a placental-to-internal os distance of 21-30 mm (n=16). Cases in which the placental edge overlapped the internal cervical (n=42) underwent cesarean section (CS). The other cases were allowed to labor and included Group 1 (n=24) with a placental edge-to-internal os distance of 1-10 mm and Group 2 (n=29) with a distance of 11-20 mm. Likelihood of CS and other obstetric variables were compared using Chi-Square and One-Way ANOVA where appropriate.

RESULTS: Mean scan-to-delivery interval was 10 days. The Group 1 and 2 differed for maternal age (35±4 vs 33±3 years, p=0.02) but had similar rates of nulliparity (58% vs 62%). Rates of CS (75% vs 31%, OR=6.7, 95% CI 2-22) and rates of bleeding before labor (29% vs 3%, OR=11.5, 95% CI 1.6-76.7) were significantly higher in Group 1 than Group 2. Blood loss at delivery (662±466 vs 510±547 mL, p=0.29) and rate of severe postpartum hemorrhage (21% vs 10%, OR = 2.3, 95% CI 0.5-9.7) were similar in the 2 groups.

CONCLUSION: Patients with marginal placenta previa and a placental edge-to-os distance >10 mm should be allowed to labor as more than two-thirds will deliver vaginally without increased risk of hemorrhage.

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317 UMBILICAL CORD GASES AND NEURO-DEVELOPMENTAL DISABILITY IN VERY PRETERM BIRTHS ALAN TITA[1], JOSEPH BIGGIO[1], SUZANNE P. P. CLIVER[1], FRED BIASINI[2], RICHARD RECTOR[2], WILLIAM ANDREWS[1], [1]University of Alabama at Birmingham, Obstetrics and Gynecology, Birmingham, Alabama, [2]University of Alabama at Birmingham, Psychology, Birmingham, Alabama

OBJECTIVE: To assess the relationship between umbilical artery acid-base status and major neurodevelopmental disability at age 6 years among very preterm births (VPTB).

STUDY DESIGN: Secondary analysis of a prospective cohort of 457 VPTBs between 23 and 32 weeks' from 1996-2001. Arterial cord gas parameters <10th %tile for pH (<7.1), base excess (< −8.6 mEq/L), bicarbonate (<21 mEq/L), PO2 (<29 mm Hg) and > 90th percentile for PCO2 (>77 mm Hg) were considered abnormal. Neurodevelopmental disability was defined as IQ <70, or the composite of IQ<70, cerebral palsy, blindness, deafness or other major deficits (abnormal balance, impaired coordination, dystonia and seizure disorder). Logistic regression was used to adjust for race and parental IQ and (in additional analyses) for gestational age (GA).

RESULTS: 261 of 375 survivors with mean GA of 28.8 weeks were evaluated at mean age of 6.8 years. In unadjusted analyses, GA (inversely) and abnormal pH, base excess and pC02, but not bicarbonate or pO2, were associated with long-term disability. Multivariable analyses with and without adjustment for GA (as a continuous variable) are presented in the table. Not shown, each 1 week increase in GA, was associated with a 25-28% significant decrease in adjusted risks of IQ<70 and composite major disability. Children with cord gas abnormalities had higher rates of disability within sub-groups of earlier and later GA.

Relationship between long-term neurodevelopmental disability and umbilical artery parameters at birth among 261 VPTBs

Parameter	pH <7.1		Base excess < - 8.6 mEq/L		PCO2	
	AOR	95% CI	AOR	95% CI	AOR	95% CI
Composite Disability						
GA-unadjusted*	3.6	1.2, 11	3.7	1.2, 11	2.2	0.8, 5.8
GA-adjusted**	2.4	0.7, 7.6	2.5	0.8, 8.2	1.9	0.7, 5.3
IQ < 70 only						
GA-unadjusted*	4.1	1.2, 14	4.4	1.3, 15	2.6	0.9, 7.3
GA-adjusted**	2.6	0.7, 9.1	2.8	0.8, 12	2.2	0.7, 6.5

*Adjusted for race and parental IQ, **Adjusted additionally for gestational age

CONCLUSION: The risk of long-term major neurodevelopmental disability associated with abnormal cord pH and base excess remains considerably increased (over 2-fold) after accounting for the strong association with GA. However, a much larger cohort would be needed to conclusively assert the suggested association between cord gas abnormalities and long-term disability.

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318 POLYSUBSTANCE ABUSE BY WOMEN IN A METHADONE TREATMENT PROGRAM INCREASES THE RISK FOR PRETERM BIRTH CHRISTOPHER ALMARIO[1], NEIL SELIGMAN[1], EDWARD HAYES[1], KEVIN DYSART[2], VINCENZO BERGHELLA[1], JASON BAXTER[1], [1]Thomas Jefferson University, Obstetrics and Gynecology, Philadelphia, Pennsylvania, [2]Thomas Jefferson University/Nemours Foundation, Neonatology, Philadelphia, Pennsylvania

OBJECTIVE: To determine whether the increased rate of preterm birth (PTB) among women in a methadone treatment program is associated with supplementation of methadone with additional substances.

STUDY DESIGN: Case-control study of opiate-addicted gravid women in a methadone treatment program. We defined cases and controls as those with a preterm or term delivery, respectively. Women who delivered a live-born neonate between 2000-2006 were included. We defined "supplements to methadone" to include alcohol (by self report) and any illicit drugs, except marijuana, found on a urine drug screen within two weeks of delivery. Odds ratio (OR) and 95% confidence interval (CI) for PTB were calculated for each substance individually and multiple substances used together.

RESULTS: We analyzed 258 opiate-addicted gravid women on methadone. The rate of PTB was 29.1%. The most commonly used "supplements" to methadone were opiates (16.7%), cocaine (13.6%), benzodiazepines (12.0%), alcohol (7.8%), and barbiturates (1.2%). We found no elevated risk for PTB in women who solely supplemented methadone with the above individual substances when compared to those not supplementing. Those using methadone with two or more "supplements" near the time of delivery were at increased risk for PTB, and there appeared to be an additive effect (Table). Tobacco use was high (86.1%) and therefore not included as a "supplement" in our model.

CONCLUSION: Opiate-addicted gravid women on methadone treatment who supplement with illicit drugs or alcohol are at increased risk for PTB, and the risk is dependent on the number of "supplements" used.

No. of "supplements" to methadone	Preterm birth OR (95% CI)
1	1.0 (0.5-2.1)
2	3.3 (1.4-7.5)
3+	6.1 (1.5-25.4)

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319 IS THERE ANY RELATION BETWEEN DEVELOPMENT OF NON REASSURING FETAL HEART RATE PATTERN AND ACUTELY INCREASED UTERINE ARTERY VASCULAR FLOW RESISTANCE DURING DINOPROSTONE USE IN POSTTERM PREGNANCIES? DENIZ KARCAALTINCABA[1], DERYA AKDAG[1], OMER KANDEMIR[1], SEDA GUVENDAG-GUVEN[1], SERDAR YALVAC[1], ALI HABERAL[1], [1]Etlik Women's hospital, Ankara, Turkey

OBJECTIVE: Development of non reassuring fetal heart rate pattern(NRFHRP) during labour is common indication for emergency Cesarian section. Sustained release form of dinoprostone is frequently used for induction of labour in posterm pregnancies. In this prospective cohort study we aimed to investigate relation between development of NRFHRP and changes in doppler parameters of fetal and uterine arteries during induction of labor with vaginal dinoporostone .

STUDY DESIGN: Totally 141 postterm pregnancies(who completed 41 gestational weeks) were included. Patients(n=108) who had successful spontaneous vaginal delivery were recruited as control group and patients(n=15) who underwent c sections due to NRFHRP were recruited as study group. Remaining 16 patients who underwent cesarian section because of other causes were excluded from final analysis. Associated risk factors were recorded. Doppler parameters(RI,PI, s/d) of umbilical, middle cerebral and uterine arteries were measured before and 4-6 hours after dinoprostone application during relaxation period of contractions.

RESULTS: There was no statiscal difference with regard to age and gestational week between study and control groups. Results of basal doppler analysis of uterine and fetal arteries were not statistically different. After vaginal dinoprostone application there was statistically significant increase in uterine arteryRI(uaRI) in study group(0.15) compared to control group(0.1) (p=0.004). ReceiverOperatingCharacteristic(ROC) curve identified an uaRI increase value of 0.11 as optimal threshold for prediction of NRFHRP with 73.3%sensitivity and 69.4%specificity. Logistic regression analysis demonstrated that increase of uaRI was predictive for NRFHRP(odds ratio(CI) 6.6(1.8-24.6))

CONCLUSION: Increased uaRI more than 0.11 after sustained release of dinoprostone in postterm pregnancies may allow earlier prediction of development of NRFHRP. Increased uaRI associated with dinoprostone use may lead poor perfusion of fetoplasental unit during labour which may be possible cause of emergency cesarean section.

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