189 **SINGLE COURSE VERSUS MULTIPLE COURSES OF ANTENATAL CORTICOSTEROIDS: A META-ANALYSIS** SAJU JOY[1], LUIS SANCHEZ-RAMOS[1], ANDREW KAUNITZ[1], [1]University of Florida, Obstetrics & Gynecology, Jacksonville, FL

OBJECTIVE: To systematically review published studies that compare the impact of single and multiple course antenatal corticosteroid therapy on infant and maternal outcomes.

STUDY DESIGN: We identified, retrieved, evaluated, abstracted data, and assessed the quality of all published studies between 1970 and March 2001 on the efficacy of single versus multiple courses of antenatal corticosteroids. Eight published reports of observational studies were identified, with three additional published abstracts (also observational studies) meeting criteria for our meta-analysis. Those eleven studies included 3415 subjects, 2059 of whom received a single course and 1356 multiple courses. We calculated an estimate of the odds ratio (OR) and risk difference for dichotomous outcomes, using a random- and fixed-effects model. Continuous outcomes were pooled using a variance-weighted average of within-study difference in means.

RESULTS: The Table lists several pertinent findings. Additionally, there were no statistically significant differences in bronchopulmonary dysplasia, necrotizing enterocolitis, retinopathy, patent ductus arteriosus, neonatal sepsis, neonatal mortality, infant birth weight or chorioamnionitis between single and multiple course groups.

CONCLUSION: Multiple courses of antenatal corticosteroids are associated with a decreased risk of RDS. However, endometritis occurs more commonly when multiple courses of corticosteroids are used. Ongoing randomized clinical trials may further define benefits and risks of multiple versus single courses of antenatal corticosteroid therapy in the setting of preterm delivery.

Table

Perinatal and maternal findings

	MULTIPLE COURSES	SINGLE COURSE	ODDS RATIO (95% CI)
Respiratory distress syndrome	484/1203	854/1865	0.73 (0.57, 0.95)
Intraventricular hemorrhage (severe III-IV)	18/778	51/1288	0.66 (0.38, 1.16)
Endometritis	111/531	96/701	2.23 (1.60, 3.12)

190 **PLATELET ACTIVATING FACTOR RECEPTOR EXPRESSION IN GESTATIONAL TISSUES** MICHAL ELOVITZ[1], EDWARD CHIEN[1], MARK PHILLIPPE[2]; [1]University of Chicago, Obstetrics and Gynecology, Chicago, IL; [2]University of Chicago, Obstetrics & Gynecology, Chicago, IL

OBJECTIVE: Platelet activating factor (PAF) is a known uterotonic agonist and has been hypothesized to play a role in parturition. However, the expression of the PAF receptor (PAFR) in gestational tissues has not been fully investigated.

STUDY DESIGN: Tissue (uterus, cervix, placenta) was harvested from nonpregnant and timed pregnant CD-1 mice to evaluate mRNA and protein expression. Expression of PAFR mRNA was determined by RT-PCR using gene specific primers and appropriate positive and negative controls. Protein expression was determined by Western blotting using a polyclonal antibody that recognizes the rat PAFR. This sequence is 95% homologous with the mouse.

RESULTS: In non-pregnant uterine tissue, there was varying expression of PAFR mRNA. In contrast, PAFR mRNA was consistently detected from both uterine and placental tissues obtained during the latter half of gestation (day 15 through 19). PAFR was detected in uterine, cervical and placental tissues by Western blotting. The molecular mass of the mouse PAFR was approximately 39 kD which is the predicted mass based on the amino acid sequence.

CONCLUSION: These studies provide evidence that PAFR mRNA and protein are expressed in gestational tissue. These studies provide further evidence that PAF plays a role in parturition.

191 **UPPER GENITAL TRACT INFLAMMATION IS INCREASED IN WOMEN WITH EARLY SPONTANEOUS PRETERM BIRTH (SPTB) BUT NOT IN WOMEN WITH PERIODONTAL DISEASE** AR GOEPFERT[1], M JEFFCOAT[1], WW ANDREWS[1], S CLIVER[1], JC HAUTH[1], O FAYE-PETERSON[1], RL GOLDENBERG[1], [1]University of Alabama at Birmingham, Dept of OB/GYN, Birmingham, AL

OBJECTIVE: To determine whether women with periodontal disease (PD) are more likely to have evidence of upper genital tract inflammation at the time of delivery when compared to those without PD.

STUDY DESIGN: Cultures of the placenta and umbilical cord blood and histopathologic examination of the placenta were performed in 59 women with a SPTB, 36 with an indicated preterm birth (IPTB), and 44 with a term birth. PTB was defined as delivery at 240/7 to 316/7 weeks' gestation (GA) and term as ≥37 wks'. Examination was performed by a periodontist at ≤72 hours postpartum. Moderate/severe PD was defined as attachment loss (AL) >5mm in any one of six oral regions (sextant). Interleukin-6 (IL-6) levels were determined by ELISA and values ≥95th percentile (46.6 pg/ml) for the term control group were considered elevated.

RESULTS: The SPTB and IPTB groups were similar with respect to age, race, and GA (28.7 vs. 29.0 wks', $P = .5$) at delivery. Differences were observed in term vs. SPTB and IPTB groups for black race (82% vs. 63 and 41%, $P = .001$). Within each delivery group, women with and without PD had similar rates of chorioamnionitis, positive placental culture, and an elevated cord plasma IL-6. Elevated IL-6 was associated with funisitis, (82 vs. 18%, $P < .001$), chorioamnionitis (100 vs. 38%, $P < .001$), and positive cord blood cultures (33 vs. 8%, $P = .008$). Elevated IL-6 was not associated with PD (41 vs. 36%, $P = .7$).

CONCLUSION: Upper genital tract inflammation at delivery is strongly associated with early SPTB but not IPTB or term birth. Moderate/severe periodontal disease does not appear to directly contribute to genital tract inflammation noted at the time of delivery in women with an early SPTB.

Table

	DELIVERY GROUP				PERIODONTAL DISEASE		
INFLAMMATORY MARKER	SPTB N = 59	IPTB N = 36	TERM N = 44	*P*	YES N = 51	NO N = 88	*P*
Pos. Placental culture (%)	69	33	73	.0003	67	58	.4
Pos. Cord UU* or Myco** (%)	23	0	5	.006	14	11	.6
Chorioamnionitis (%)	75	17	50	<.0001	55	50	.6
Funisitis (%)	50	3	18	<.0001	26	29	.6
Cord IL-6 (>95%) (%)	36	0	7	<.0001	20	17	.7

*Ureaplasma urealyticum, **Mycoplasma species.

192 **MODERATE/SEVERE PERIODONTAL DISEASE AND EARLY SPONTANEOUS PRETERM BIRTH (SPTB)** AR GOEPFERT[1], M JEFFCOAT[1], WW ANDREWS[1], S CLIVER[1], JC HAUTH[1], N GEURS[1], RL GOLDENBERG[1], [1]University of Alabama at Birmingham, OB/GYN, Birmingham, AL

OBJECTIVE: To determine if women who have an early SPTB are more likely to have periodontal disease when compared to women who have an indicated preterm birth (IPTB) or a term birth.

STUDY DESIGN: Women with a SPTB (N = 59), an IPTB (N = 36), or a term birth (N = 44) underwent a dental examination by a periodontist within 72 hours postpartum. Periodontal health was defined as no evidence of attachment loss (AL) or gingivitis. Periodontal disease (PD) was defined as an AL of ≤3 mm with inflammation (gingivitis), 4-5 mm (mild), or >5mm (moderate/severe) in any one of six oral regions (sextant). PTB was defined as delivery between 24 0/7 and 31 6/7 weeks' and term as ≥37 weeks' gestation (GA). Sample size was determined assuming a 2.5 fold increased rate of PD in women with a SPTB versus IPTB or term controls ($\alpha = .05$, $\beta = .02$).

RESULTS: The SPTB and IPTB groups were similar with respect to maternal age, race, and GA (28.7 vs. 29.0 wks', $P = .5$) at delivery. Differences were observed in term vs. SPTB and IPTB groups for percent black race (82% vs. 63 and 41%, $P = .001$). Probing depth was not associated with SPTB in this population. After adjusting for race, education, parity, prior SPTB history, and smoking, moderate/severe PD (OR 2.6, 95% CI 1.1-6.2) was associated with SPTB vs. IPTB and term birth.

CONCLUSION: Women with an early SPTB are more likely to have moderate to severe periodontal disease than IPTB or term controls.

Table 1

The severity of PD by study group

STUDY GROUP	HEALTHY	GINGIVITIS	MILD PD	MODERATE/ SEVERE PD
SPTB N (%)	0	16 (27%)	14 (24%)	29 (49%)*
IPTB N (%)	0	15 (42%)	12 (33%)	9 (25%)
Term N (%)	0	18 (41%)	13 (30%)	13 (30%)

*$P = .03$ when compared to gingivitis and mild PD.

Table 2

The extent of moderate/severe PD by study group.

	NUMBER OF SEXTANTS WITH AL > 5MM			
STUDY GROUP	0	1-2	3-4	5-6
SPTB N (%)	30 (51%)*	20 (34%)	6 (10%)	3 (5%)
IPTB N (%)	27 (75%)	4 (11%)	3 (8%)	2 (6%)
Term N (%)	31 (70%)	9 (20%)	4 (9%)	0

*$P = .02$ when compared to AL >5mm in any sextant.