169 **DOES OPERATIVE VAGINAL DELIVERY WORSEN THE OUTCOME OF PERMANENT BRACHIAL PLEXUS INJURY?** ALESSANDRO GHIDINI[1], ROBERT ALLEN[2], TED ROSENBAUM[3], CATHERINE SPONG[4]; [1]Georgetown University, Obstetrics and Gynecology, Washington, DC; [2]Johns Hopkins University, Biomedical Engineering, Baltimore, MD; [3]RDA, Baltimore, MD; [4]NICHD, NIH, PPB, Bethesda, MD

OBJECTIVE: To evaluate if operative vaginal delivery worsens the extent and degree of permanent brachial plexus injury (PBPI).

STUDY DESIGN: Utilizing a data set (n = 104) of deliveries resulting in PBPI that were ultimately litigated, detailed delivery information was obtained by chart review. Patients who had an operative vaginal delivery (forceps, vacuum or both, (n = 35) were compared with those not requiring an operative delivery (n = 69) as regards to neonatal outcome and the location and extent of neurologic injury.

RESULTS: The two groups were similar in demographic and obstetric variables (see Table). There were no differences in rates of 5 minute Apgar scores <7 (16%; 5/31 vs 6%; 4/60; $P = .2$), complete neurologic injury of the brachial plexus (C5-T1) (39% 13/33 vs 38%; 25/66 $P = 1.0$) or avulsion of the nerve roots (44% 12/27 vs 36% 18/50, $P = .5$) between those with operative or spontaneous vaginal delivery.

CONCLUSION: Operative vaginal delivery does not result in a worse outcome in a data set of cases of shoulder dystocia resulting in permanent brachial plexus injury.

Table

	SPONTANEOUS DELIVERY	OPERATIVE DELIVERY	*P* VALUE
Gestational age (wks)	39.2+/-1.5	39.3+/-1.4	.7
Maternal age (yr)	28.2+/-5.4	28.3+/-5.2	.9
Maternal Weight (lb)	203+/-38	190+/-29	.2
Nulliparous	21% (12/57)	50% (15/30)	.01
Diabetes	20% (10/51)	21% (6/29)	1.0
Time on perineum (min)	170+/-88	156+/-111	.7
Birthweight (gm)	4241+/-439	4191+/-531	.6
Male gender	52% (36/69)	63% (22/35)	.4

170 **WHAT ARE THE INDEPENDENT RISK FACTORS FOR REPEATED CESAREAN SECTION IN TRIAL OF VBAC?** ZAHI BEN-AROYA[1], MORDECHAI HALLAK[2], DAVID SEGAL[3], MICHAEL FRIGER[4], MIRIAM KATZ[3]; [1]Edith Wolfson Medical Center, Obstetrics and Gynecology, Holon; [2]Ben-Gurion University Soroka Medical Center, Beer-Sheva, Israel; [3]Soroka University Medical Center, Obstetrics and Gynecology, Beer-Sheva; [4]Ben-Gurion University, Health Sciences-Epidemiology, Beer-Sheva

OBJECTIVE: To assess the independent risk factors for repeated cesarean section (CS) in trial of vaginal birth after cesarean section (VBAC).

STUDY DESIGN: Between the years 1989-1997, 1436 parturients in their second pregnancy after previous CS, underwent a trial of VBAC. Only singleton pregnancies in vertex position were included. We assessed the effect of maternal age, gestational age, fetal weight, induction of labor using Foley catheter or PGE2, artificial (AROM) and preterm (PROM) rupture of membranes, oxytocin augmentation of labor, epidural analgesia, presence of pregnancy induced (PIH) or chronic (CHT) hypertension, oligo or polyhydramnion, gestational (GDM) or pregestational diabetes mellitus (DM) and meconium stained amniotic fluid (MSAF) on failed VBAC rate. Multivariate analysis was performed to evaluate the factors mostly and independently affecting the need for repeated CS.

RESULTS: The factors found to independently affect repeated CS rate are shown on Table. All other factors had no effect on repeated CS rate.

CONCLUSION: AROM, oligo and polyhydramnion, PROM, PIH and MSAF, are all independent risk factors for repeated CS in trial of VBAC.

Table

Risk factors for repeated CS in trial of VBAC

	RELATIVE RISK	*P*
AROM	4.55	.012
Oligohydramnion	3.75	<.01
Polyhydramnion	3.62	<.01
PROM	2.66	.04
PIH	1.80	<.01
SAF	1.47	<.01

171 **INTRAPARTUM PREDICTORS (IP) OF UTERINE RUPTURE** ELIZABETH PRYOR[1], BRITT BEAVER[1], DAVID MERRILL[1], [1]Wake Forest University, Obstetrics & Gynecology, Winston-Salem, NC

OBJECTIVE: Uterine rupture (UR) is an obstetric emergency occurring in approximately 1% of women with a history of uterine scar. The objective of this study is to identify specific intrapartum predictors of UR in patients attempting vaginal birth after cesarean (VBAC).

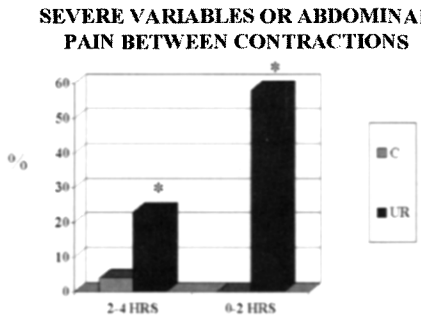
STUDY DESIGN: This case-controlled study reviewed cases of UR from 8/95-6/00 at Forsyth Medical Center. Controls (C) were selected in a 2:1 design by the immediate successful VBAC before and after each UR. The same two physicians reviewed all fetal heart tracings. IP included mild variables (MV), severe variables (SV), late decelerations, persistent abdominal pain (PAP), vaginal bleeding, hyperstimulation, bradycardia at >4 hours (h), 2-4 h, and <2 h from delivery. Statistical analysis was performed by three methods: One-Way ANOVA, Chi-square, and Fisher's exact test. Data are presented as Mean +/- SD or %.

RESULTS: 26 cases of UR and 52 C were identified. Maternal age, previous vaginal delivery, previous CS >2, and birthweight were not statistically different. Gestational age at delivery (UR 37.5 +/-4 v C 39.5+/-1.7 weeks), duration of oxytocin (O) use (UR 523 v C 360 min), maximum dose of O (UR 11.6 v C 7.2 mU/min) were statistically different ($P < .003$). Use of cervical ripening agents was greater in UR (cytotec 19% v 4%) (gel 8%/laminaria 4% v 0%) ($P < .05$). At 0-2 h before delivery, MV (38.5% v 4%), SV (38.6% v 0%), PAP (31% v 0%) were more common in UR as were SV or PAP between 2-4 h (UR 23% v C 4%) and between 0-2 h (UR 58% v C 0%) ($P < .05$).

CONCLUSION: UR occurred more frequently in patients undergoing cervical ripening, and in those experiencing MV, SV, or PAP 0-2 h before delivery. In the present series of patients attempting VBAC, performance of a cesarean section when SV or PAP was present 0-4 h before delivery possibly would have prevented 23-58% of UR.

Figure

Severe variables or abdominal pain between contractions



172 **VAGINAL DELIVERY AFTER EXTERNAL CEPHALIC VERSION** ANDRZEJ LYSIKIEWICZ[1], LOIS BRUSTMAN[1], BARAK ROSENN[1], SOPHIA SCARPELLI[2], ODED LANGER[3]; [1]St Luke's Roosevelt Hospital Center, Obstetrics and Gynecology, New York, NY; [2]St Luke's Roosevelt Hospital, Obstetrics and Gynecology, New York, NY; [3]Columbia University, Obstetrics & Gynecology, New York, NY

OBJECTIVE: To assess the outcome of breech presentation at 36-37 wks with and without use of external cephalic version (ECV).

STUDY DESIGN: 108 patients with breech presentation at 36-37 wks confirmed by ultrasound in our Perinatal Center were offered ECV. 40 patients accepted the procedure and were followed regarding their obstetrical and perinatal outcome. 68 patient had no ECV performed and their pregnancy outcome was followed.

RESULTS: Of the 40 patients who initially agreed to undergo ECV, 3 patients had spontaneous conversion to vertex presentation, 4 declined to follow with ECV and 4 did not undergo the procedure due to nuchal cord (2), HIV (1) and oligohydramnios (1). Among the remaining 29 undergoing ECV the procedure was unsuccessful in 15 (52%) and successful in 14 (48%) but only 9 of these achieved vaginal delivery. The other 4 patients required cesarean delivery for face presentation (2), occiput posterior (1), and chorioamnionitis (1). There were no detectable adverse effects of ECV on neonatal outcome. Two cases of non reassuring FHR following unsuccessful ECV were delivered by CS with good neonatal outcome. One unexplained fetal demise was noted 1 week after successful version and reassuring fetal testing. Out of 68 patients with no ECV performed a spontaneous conversion to vertex presentation occurred in 28 (41%) patients. Of these 12 delivered vaginally. Overall 10 (25%) of ECV and 12 (18%) of no ECV achieved vaginal delivery.

CONCLUSION: Even after successful ECV 28% of patients did not deliver vaginally, mostly due to persistent malpresentations. Women undergoing ECV should be counselled regarding these limitations.