157 **PREDICTION OF THE RATE OF UTERINE RUPTURE USING AN OBSTETRICAL SCORING SYSTEM** THOMAS SHIPP[1], CAROLYN ZELOP[2], AMY COHEN[3], JOHN REPKE[4], FREDERIC FRIGOLETTO[5], BENJAMIN SACHS[6], ELLICE LIEBERMAN[7]; [1]Brigham and Women's Hospital, Maternal Fetal Medicine, Boston, MA; [2]University of Connecticut Health Center, Farmington, CT; [3]Brigham and Women's Hospital, Obstetrics and Gynecology, Boston, MA; [4]University of Nebraska Medical Center, Omaha, NE; [5]Mass General Hospital, Obstetric and Gynecology, Boston, MA; [6]Beth Israel Deaconess Hospitals, Obstetrics and Gynecology, Boston, MA; [7]Brigham and Women's Hospital, Maternal Fetal Medicine, Boston, MA

OBJECTIVE: To develop a simple scoring system to quantify risk for symptomatic uterine rupture based on factors known during early pregnancy.

STUDY DESIGN: Our patient population included all trials of labor after prior cesarean over a 12 year period (7/84-6/96) at Brigham and Women's Hospital. We determined those factors associated with an increased or decreased risk for symptomatic uterine rupture and assigned scores based upon the strength of the association. The following numerical values were used: 2 points for ≥2 prior cesarean scars, 1 point for interdelivery interval ≤18 months, 1 point for maternal age of 30-39 years, 2 points for materal age ≥40 years. We also subtracted 1 point for women with prior vaginal delivery and only one prior cesarean.

RESULTS: There were 40 uterine ruptures in 4383 trials of labor (0.91%). Overall, the rate of uterine rupture varied by score: -1-0.3% (1/391), 0-0.3% (4/1613), 1-1.1% (21/1894),2-2.4% (9/370), 3-3.7% (4/108), and 4-14.3% (1/7), $P = .001$. The rate of uterine rupture is also shown below in Table.

CONCLUSION: The rate of symptomatic uterine rupture during a trial of labor varies greatly depending on easily identified risk factors, and is low for women without risk factors. This scoring system can provide a more precise estimate of the risk of uterine rupture for women who are deciding on delivery management after a prior cesarean.

Table

SCORE	-1 OR 0	1	2	3 OR 4	*P*
Overall	0.3%	1.1%	2.4%	4.4%	.001
Spontanous	0.3%	0.7%	2.1%	5.4%	.001
Induced	0.3%	2.7%	3.7%	0% (0/22)	.008

158 **A NOVEL PROTOCOL FOR THE MANAGEMENT OF ANTENATALLY DIAGNOSED PLACENTA ACCRETA** VICTORIA MINIOR[1], ADIEL FLEISCHER[1], DAVID SIEGEL[2]; [1]Long Island Jewish Medical Center, OB/GYN, New Hyde Park, NY; [2]Long Island Jewish Medical Center, Radiology, New Hyde Park, NY

OBJECTIVE: To propose a protocol for patients (pts) with sonographically diagnosed placenta accreta that results in uterine preservation and minimal blood loss.

STUDY DESIGN: Pts with findings suggestive of placenta previa and accreta had a curved angiographic, 5F catheter positioned in the abdominal aorta through an axillary arterial approach prior to cesarean section. A high transverse uterine incision was made at the upper edge of the placenta (sonographically mapped intraoperatively) to avoid significant blood loss prior to embolization. After delivery of the infant, selective catheterization and embolization (with gelfoam pledgets) of the uterine artery and its branches was performed. Removal of the placenta was then attempted and if necessary, all or part of the placenta was left in-situ. If bleeding was noted, a large mattress suture was placed with a straight needle to compress the anterior to the posterior lower uterine segment. Uterotonic agents were administered post-op.

RESULTS: Six pts were managed prospectively with this protocol. Five were embolized and delivery occurred with minimal bleeding (mean EBL = 1300cc). Only 1 patient received blood transfusion (2 units). In 2 pts, the placenta was entirely removed and in the remaining 3, all or part of the placenta was left in-situ. The first patient was treated with methotrexate (MTX) and developed severe leukopenia and sepsis, subsequently MTX was no longer employed and placental resolution occurred without complication. In the sixth patient, the uterine incision was inadvertently made too low and heavy bleeding was encountered necessitating hysterectomy prior to embolization.

CONCLUSION: Intraoperative, ultrasound guided placental mapping used in combination with careful surgical planning and embolization prior to attempted delivery of the placenta results in minimal blood loss and uterine preservation in cases of placenta accreta. Placenta left in-situ can resolve spontaneously with minimal complication even in the absence of MTX.

159 **THE RISK OF PREGNANCY-RELATED DEATH ASSOCIATED WITH CESAREAN SECTION REMAINS AFTER CONTROLLING FOR MULTIPLE MEDICAL CONDITIONS, INTRAPARTUM COMPLICATIONS AND AGE** MARGARET HARPER[1], ROBERT MEYER[2], MARK ESPELAND[3]; [1]Wake Forest University, Obstetrics and Gynecology, Winston-Salem, NC; [2]NC Department of Health and Human Services, Center for Health Statistics, Raleigh, NC; [3]Wake Forest University School of Medicine, Public Health Sciences, Winston-Salem, NC

OBJECTIVE: Obstetricians and their patients have come to view cesarean section as a low risk procedure. Have we lost site of the risks associated with this common mode of delivery? The objective of this study was to determine the risk of pregnancy-related mortality associated with cesarean section compared to vaginal delivery.

STUDY DESIGN: A population based, case-control study of pregnancy-related deaths (PRD) with a live birth outcome in North Carolina for the seven-year period, 1992-1998. All maternal deaths within one year of a live birth (n = 270) were reviewed and classified as pregnancy-related or not pregnancy-related. A 0.4% random sample of all live births within the State during the same period was selected as controls. The unadjusted odds ratio (OR) for PRD associated with cesarean section (CS) was determined. An adjusted OR was also derived after simultaneously controlling for medical conditions (heart disease, hypertension, diabetes, lung disease, pregnancy-induced hypertension), intrapartum complications (eclampsia, bleeding in labor and delivery, fever in labor, placental abruption and placenta previa) and maternal age as recorded on the birth certificate.

RESULTS: A total of 98 cases were validated as pregnancy-related and had information from the birth certificate regarding mode of delivery. The CS rate among cases and controls was 46.9% and 16.4% respectively. The unadjusted OR for PRD associated with CS was 4.5 (95% CI 3.0, 6.8). After simultaneously controlling for medical conditions, intrapartum complications, and maternal age, the OR for PRD associated with CS remained significant at 3.8 (95% CI 2.5, 6.0).

CONCLUSION: Although the risk of pregnancy-related mortality is small, this risk is increased 3 to 4 fold with cesarean section compared to vaginal delivery even after controlling for multiple medical conditions, intrapartum complications and maternal age.

160 **A PROSPECTIVE TRIAL OF TWO PROCEDURES FOR PERFORMING CESAREAN SECTION** GC DIRENZO[1], A ROSATI[1], A CUTULI[1], S GERLI[1], L BURNELLI[1], L LIOTTA[1], R LUZIETTI[1], G AFFRONTI[2], G POMILI[2], G LUZI[2]; [1]Centre of Perinatal and Reproductive Medicine, University of Perugia, Perugia, Italy; [2]Department of Obstetrics and Gynecology, Hospital Monteluce, Perugia, Italy

OBJECTIVE: The aim of the study was to assess the maternal-perinatal outcome and rate of surgical complication comparing two different surgical techniques for performing caesarean section: the Stark procedure (StCS) and the classical lower segment cesarean section (LSCS).

STUDY DESIGN: From 1/07/99 to 30/06/01, all women requiring cesarean section were randomly allocated to StCS or LSCS. Evaluation was performed on 1039 cases (555 StCS and 484 LSCS).

RESULTS: The indications for intervention (acute or chronic fetal distress, dystocia, maternal diseases, multiple pregnancy, breech presentation, etc.) were not statistically different between the two groups. Of all the maternal and perinatal parameter evaluated, the following were found to be statistically significant: type of anaesthesia (44% general and 56% loco-regional in StCS versus 81% general and 19% loco-regional in LSCS); length of postpartum stay in hospital (<6 days in 90% of StCS versus 38% in LSCS); incidence of > 2g/dl Hb drop after surgery (23% in StCS versus 28% in LSCS); incidence of Apgar score < 7 at 1 min (19% in StCS versus 26% in LSCS); incidence of Apgar < 7 at 5min (3.5% in StCS versus 6.6% in LSCS). No difference was detected in the incidence of postpartum fever, haemorrhage, suture-dehiscence, inflammation or infection.

CONCLUSION: In this trial the Stark procedure was associated with a significant decrease in postpartum stay in hospital, a better maternal-neonatal outcome and a decrease of hospital costs compared to the traditional LSCS. We therefore recommend this as the procedure of choice in performing cesarean section.