

MCD<4.00 was associated with COMP (OR-2.3, 1.1-4.9, p=0.03), with a specificity of 69.5%, (59-79) and sensitivity of 50% (34-66). Secondary analysis using SGA as the outcome also yielded significant associations (PQ: OR-3.9, 1.5-9.87; MCD: OR-4.3, 1.7-11.1).

**CONCLUSION:** Small placental volume and eccentric cord insertion are significantly associated with adverse perinatal outcome and may serve as biologically plausible predictors of placental dysfunction. Further research is warranted to investigate the optimal application of these novel 3D ultrasound techniques.

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### 367 Routine ultrasound screening for placenta accreta, “The Accreta Scan”, in women undergoing repeat cesarean section does not predict intraoperative hemorrhage and may increase rates of cesarean hysterectomy

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**OBJECTIVE:** We determine whether routine ultrasound exam for placenta accreta in women with prior cesarean delivery, termed “Accreta Scan”, corresponds with intraoperative hemorrhage and morbidity.

**STUDY DESIGN:** A case control study was performed using 640 women who were delivered by repeat cesarean section between 2007-2008. Women who served as cases were prospectively screened for sonographic evidence of placenta accreta at a mean gestational age of 33 weeks (N=149). The remaining 491 women were not screened and served as controls. Operative findings, hemorrhage, blood transfusion, and pathologic specimens were compared for cases and controls. The sensitivity and positive predictive value of the Accreta Scan for placenta accreta and hemorrhage were determined.

**RESULTS:** The incidence of Accreta was 12/1000 in the total group. Accreta with anterior placenta without previa occurred in 4/1000 women. Pathologic incidence of Accreta for cases and controls was the same (0.13 vs. 0.10, p= 0.8). Demographics were the same for cases and controls. Uterine atony, cesarean hysterectomy, and volume of blood products transfused were greater in the screened women. The sensitivity of the accreta scan was 50%, PPV of 25% for accreta and 14% for hemorrhage.

**CONCLUSION:** There is no correlation between an accreta scan and hemorrhage at repeat cesarean section. This is likely due to the low incidence of accreta in the absence of placenta previa, and other more common causes of intraoperative hemorrhage. Routine screening for placenta accreta may set the stage for more cesarean hysterectomies.

#### Intraoperative Findings for Women with Repeat Cesarean Delivery

	Screened Cases(%)	Unscreened Controls(%)	p
N( 640)	149	491	
Adhesions	57 (38)	163 ( 33)	NS
Ut Atony	11 (7.4)	19 (3.9)	0.03
Hysterectomy	6 (4)	5 (1)	0.004
Lacerations	3 (2)	7 (1.4)	NS
Ut Rupture	1 (0.7)	1 (0.2)	NS
Trx vol. *	68	113	0.001

\*Transfusion Mean vol.(cc)/person/group

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### 368 Implications for prenatally diagnosed liver calcifications and abdominal echogenic foci

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**OBJECTIVE:** The purpose of this study is to examine cases of prenatal calcifications in the liver and abdominal echogenic foci, and determine the clinical significance of these findings.

**STUDY DESIGN:** A retrospective, non-blinded chart review was performed from 2004 through 2009. 38 cases were identified from our ultrasound database. Exclusion criteria were incomplete records or patients lost to follow-up.

**RESULTS:** The incidence of these ultrasound findings was 1 in 430 cases. Seven cases had the isolated ultrasound findings of liver calcifications or abdominal echogenic foci. These children had a postnatal abdominal x-ray or ultrasound performed, and two of the seven cases had liver calcifications. These findings were diagnosed as a calcified hemangioma or vascular calcification in one case and a nonobstructive thrombus in the L. portal vein in the other case. Both of these children had otherwise normal exams at birth. Twenty-one cases had other ultrasound anomalies in conjunction with liver calcifications and abdominal echogenic foci. There was a range of concurrent anomalies: hydrops (10%), renal pyelectasis (14%), club feet (10%), intracardiac echogenic foci (28%) and IUGR (10%). Single cases of Dandy-walker, severe ventriculomegaly and an abdominal mass were seen. These children tended to have poorer prognoses; their outcomes entailed chromosomal abnormalities (19%), extreme premature births (19%), and meconium perforation (10%).

**CONCLUSION:** The prenatal findings of liver calcifications or an echogenic focus in the abdomen seem to be a benign finding as an isolated abnormality. An imaging study is recommended for the infant in the postnatal period. This evaluation may reveal a vascular abnormality but generally these children seem to have good short term prognoses. However, if these ultrasound findings are seen concurrently with other anomalies, these children seem to have a poorer prognosis.

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### 369 Portal vein Doppler in IUGR fetuses delivered at 32 weeks

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**OBJECTIVE:** Animal studies have shown increased blood flow through the ductus venosus proportionate to the severity of fetal hypoxia. Although data suggest this also occurs in the human fetus, it has never been demonstrated. The aim of this study was to characterize the portal vein (PV) Doppler, which has a monophasic pattern in normal fetuses, from the time of diagnosis of IUGR to delivery of the fetus.

**STUDY DESIGN:** Initial assessment with PV Doppler occurred at the time of diagnosis of IUGR (EFW<10th percentile and abnormal umbilical artery pulsatility index); the final study occurred within 24 hours of delivery. PV waveforms were correlated to perinatal death or acidemia at birth. Umbilical artery cord pH was evaluated at birth [considered abnormal if the value was <7.10 and/or the base deficit was <-9.0 (2 SD below the mean for preterm neonates)]. Fisher’s exact test was used for statistical analysis.

**RESULTS:** PV Doppler waveforms were assessed on 69 occasions in 14 IUGR fetuses (median: 4 studies; range: 2-10). The median gestational age (GA) at the time of the first study was 26.6 weeks (range: 21.6-30.1 weeks) and at the last study was 28.4 weeks (range: 25-31.6 weeks). Three distinct and progressive Doppler patterns were observed: a) monophasic; b) biphasic; and, c) reversed flow. 86% of the PV Dopplers were monophasic and 14% were biphasic at the 1st examination. Of those that were biphasic, 100% progressed to reversed flow. 50% of those that were monophasic progressed to biphasic and 33% of those progressed to reversed flow. Five fetuses had an adverse perinatal outcome: 3 IUFDs and 2 fetuses who were acidemic at birth. All 5 fetuses had either biphasic (n=2) or reversed flow (n=3) patterns. Among the other 9 fetuses, 7 had monophasic and 2 had biphasic patterns (p<0.05).