

practical implications for antenatal estimation of fetal fat accretion and may be clinically useful in the development of a fetal-based strategy directed toward the prevention of neonatal adiposity and later childhood obesity.

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354 The prenatal diagnosis of isolated varix of the fetal intra-abdominal umbilical vein (VFIUV): reconsideration of indicated prematurity

Maayan Bas-Lando¹, Ronni Rabinowitz², Arnon Samueloff³, Ori Shen¹, Michael S. Schimmel⁴, Sorina Grisar-Granovsky⁵

¹Shaare Zedek MC, Obstetrics and Gynecology, Jerusalem, Israel, ²Shaare Zedek MC, ObGyn Imaging, Hebrew University, Israel, ³Shaare Zedek MC, Obstetrics and Gynecology, Hebrew University, Israel, ⁴Shaare Zedek MC, Neonatology, Hebrew University, Jerusalem, Israel, ⁵Shaare Zedek MC, Obstetrics and Gynecology, Hebrew University, Jerusalem, Israel

OBJECTIVE: VFIUV was initially reported at stillborns' postmortem. The natural history and management of isolated VFIUV are uncertain; delivery at 34 weeks was suggested to minimize stillborn risk. We aimed to evaluate our experience with isolated VFIUV and its association with perinatal outcome.

STUDY DESIGN: Retrospective case series of all cases of isolated VFIUV (2004-2009) in a tertiary center. VFIUV diagnosis: focal dilatation >9mm or at least 50% larger than the intrahepatic UV, using GA specific criteria. Color-flow performed isolated VFIUV defined: normal antenatal anatomy ultrasound, karyotype and neonate. Timing of delivery was according to treating physician, starting at 35 weeks. Maternal and neonatal records' review; confirmation by phone interviews. Descriptive statistics *mean* ± *SD*, range, chi square, Pearson coefficient.

RESULTS: 24 women with fetuses with isolated VFIUV (excluded one lost for follow up). Demographics: maternal age 33 ± 7.1 years; mean gravidity 4.9 ± 2.7; GA initial diagnosis 30.5 ± 4.4 weeks (20-39); singletons 20 (87%). VFIUV diameter 13 mm ± 2.9 (9-20), turbulent flow 7 (30.4%). All fetuses were live-born, with a normal follow up 2 – 60 months. GA birth 37 ± 2.5 weeks (33-41); birthweight 2866 ± 687.6 grams; males 14 (60.9%). Overall induction 65.2%. Preterm induction due to VFIUV alone performed in 4 (17.4%); other causes for preterm delivery 5 (21.7%) (3 twins, 1 PPROM, 1 abruptio); allowed to continue until spontaneous labor 14 (60.9%). Overall cesarean 28.6% (4/23). Overall NICU admission 5 (21.7%). Timing and mode of delivery were unrelated to the GA diagnosis, size and type of flow of VFIUV (*p*=0.101, *p*=0.727, *p*=0.671 respectively) = 0.4. Those induced preterm significantly contributed to the higher rate of cesarean and NICU admission *p*=0.015 and *p*= 0.029, respectively.

CONCLUSION: Isolated VFIUV is a sonographic diagnosis with an apparent benign course. Our excellent perinatal outcome, unrelated to the structural and flow characteristics of the finding, warrants against early induction and costly preterm births.

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355 Sonographic accuracy of twin fetal weight estimation in obese women: evidence from the national ESPRIT study

Fionnuala M Breathnach¹, Stephen Carroll², Fionnuala McAuliffe², Michael Geary³, Sean Daly⁴, John R Higgins⁵, James Dornan⁶, John Morrison⁷, Gerard Burke⁸, Shane Higgins⁹, Fergal D. Malone¹

¹Royal College of Surgeons in Ireland, Dublin, Ireland, ²National Maternity Hospital, Dublin, Ireland, ³Rotunda Hospital Dublin, Dublin, Ireland, ⁴Coombe Women and Infants' University Hospital, Dublin, Ireland, ⁵University College Cork, Ireland, ⁶Royal Victoria Maternity Hospital Belfast, Ireland, ⁷National University of Ireland, Galway, Ireland, ⁸Mid-Western Regional Maternity Hospital, Limerick, Ireland, ⁹Our Lady of Lourdes Hospital, Drogheda, Ireland

OBJECTIVE: The combined challenges of maternal obesity and multiple gestation test the sonographic accuracy of fetal weight estimation in the third trimester. We sought to determine the accuracy of fetal

weight determination in twin gestations in accordance with maternal body mass index (BMI).

STUDY DESIGN: The ESPRIT Trial is a national prospective population study of twin pregnancies managed and delivered at 8 tertiary referral centers in one country. All pregnancies were followed using a uniform sonographic surveillance protocol, which included 2-weekly sonographic determination of fetal weight in the third trimester. Fetal weight determined within 14 days of delivery was compared to actual birthweight and the associated error calculated.

RESULTS: Body mass index was recorded at registration for 609 study participants at a median gestational age of 22 weeks. The median BMI was 24 kg/m² at registration (range 18–50kg/m²). Sonographic estimation of fetal weight was strongly predictive of birthweight, with a marginally better predictive ability for the presenting twin. There was no association between maternal BMI and the error in weight estimation of either the presenting twin (*p*-value 0.6757) or the non-presenting twin (*p*-value 0.9010). A multiple regression analysis of fetal weight estimation with BMI, gestational week at birth and ultrasound-to-delivery interval identified that weight of each twin was underestimated by less than 100 grams for each week of the ultrasound-to-delivery interval (*p*-value <0.0001).

CONCLUSION: There is no evidence to suggest that increasing maternal obesity decreases the accuracy of sonographically determined fetal weight of either the presenting twin or its co-twin. Time lapse between ultrasound scan and birth was the main contributor to the discrepancy between estimated fetal weights and birthweights. With this taken into account, there remained some evidence to suggest an underestimation of the weight of the non-presenting twin weight with ultrasound.

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356 Current practices in determining amnionity and chorionity in multiple gestation

Jennifer Wan¹, Véronique Taché¹, Kristen Quinn¹, David Schrimmer¹, Yvette Lacoursiere¹, Gina James¹, Dolores Pretorius²

¹University of California, San Diego, Department of Reproductive Medicine, San Diego, California, ²University of California, San Diego, Department of Radiology, San Diego, California

OBJECTIVE: Accuracy of diagnosis of amnionity and chorionity (A/C) is vital in the counseling and management of multi-fetal gestations. The purpose of this study was to evaluate the accuracy of A/C diagnoses of referral physicians and a tertiary care center as compared to final histopathologic diagnosis.

STUDY DESIGN: A retrospective cohort study of patients with multi-fetal gestations was performed comparing A/C diagnoses of referring physicians, a tertiary care center, and final histopathology.

RESULTS: A total of 271 multi-fetal pregnancies were referred for evaluation. Tertiary care center A/C diagnosis was significantly more accurate (*p*<0.001) than referral physician A/C diagnosis for twin gestations when compared to histopathologic diagnosis. Of 234 referred twin pregnancies, 104 (44.4%) had not been assigned a diagnosis of A/C; 110 (47.0%) had accurately identified A/C prior to tertiary care center evaluation. The tertiary care center accurately identified 227 (97.0%) of the 234 referred twin pregnancies. In the 37 higher order multiples, there was a significant difference (*p*<0.001) in accuracy of diagnosis when comparing tertiary care center and referral diagnoses to histopathologic diagnosis, when including unassigned patients as an "inaccurate" diagnosis. However there was no significant difference (*p*=0.5659) when they were excluded from the analysis.

CONCLUSION: The accurate diagnosis of A/C can be a complex process that significantly alters pregnancy management. Given the significant differences in accuracy in determining A/C between the tertiary care center and referral physicians, there should be an emphasis on enhancing these diagnostic skills in the general community.

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