gestation the Abdominal circumference, TF, FAST and EFW centile were all found to be statistically significant predictors of birthweight. Using backwards stepwise linear regression to find the optimal multivariate model for predicting birthweight a combination of EFW centile and TF were found to be the best predictors. At 37 weeks optimal multivariate model for BW prediction was EFW centile, FAST and TF. The results reveal acceptable reproducibility for fetal mid thigh muscle and fat for a single operator and between operators.

Conclusion This prospective study provides reference ranges for fetal mid thigh fat and muscle throughout gestation in fetuses with a normal growth velocity. The inclusion of fetal mid thigh fat in the birthweight algorithm improves the predictive power of birthweight estimation at 28 weeks and 37 weeks. This information is important to explore the role of fetal mid thigh in the detection of fetal IUGR at point estimations of EFW within normal centiles.

**PF:13** FETAL ECHOCARDIOGRAM: AN 18-YEAR REVIEW FROM THE WESSEX REGION

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Background Echocardiographic abnormalities are common and vary in severity. However, the majority of affected infants are identified and managed antenatally and survival rates are excellent.

Objectives To assess the incidence of echocardiography abnormalities and maternal co-morbidities recorded in a large cohort over an 18-year period.

Method A retrospective review of all cases of fetal echocardiography performed at a single tertiary centre (Wanda) between 1994 and 2012.

Results A total of 919 cases were identified over the 18-year period of which 897 (98%) were recorded.

Interrater agreement on 10 cases was excellent (k = 0.97).

13% of cases observed had echocardiographic abnormalities. The rates of congenital heart disease were: ventricular septal defect 2%, tetralogy of Fallot 1.2%, atrial septal defect 1.8%.

Conclusion The incidence of fetal echocardiographic abnormalities is lower than previous reports. The majority can be managed antenatally with good outcomes.

**PF:15** EXPECTANT MANAGEMENT OF MONOCHORIONIC DIAMNIOIC TWINS WITH SELECTIVE INTRAUTERINE GROWTH RESTRICTION

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We sought to evaluate the outcomes in a cohort of MCDA twins with a diagnosis of selective intrauterine growth restriction (sIUGR) who were managed expectantly.

This prospective multicenter cohort study recruited 1,028 unselected twin pairs over 2 years in Ireland. Monochorionic twins underwent fortnightly ultrasonographic surveillance from 16 weeks. The defining criterion for sIUGR was an estimated fetal weight less than the 10th centile in one twin with an appropriately grown co-twin. Details of the prenatal course, delivery timing and perinatal outcomes were recorded.

Outcome data were recorded for 100% of the 1,001 twin pairs that completed the study (n = 200 monochorionic). Five percent (n = 10) of the MCDA twin pregnancies were diagnosed with sIUGR at a median gestation of 30 weeks (range 26 – 35 weeks). AEDF or REDF was identified in two of these cases. The median time interval from diagnosis to delivery was 36.8 days (range 3 – 66 days) at a mean gestation of 34.2 weeks (range 26 – 37.9 weeks). 70% of the affected twins were admitted to the NICU with a mean stay of 19 days. There were no perinatal mortality recorded.

Our findings demonstrated excellent outcomes for our cohort of MCDA twins complicated by selective IUGR. There was no single IUFD and in turn there was no morbidity conferred to the appropriately grown co-twin. Close surveillance with regular ultrasonography and Doppler evaluation was essential and allowed continuation of the majority affected pregnancies to a late gestation age, thereby optimising outcome for both twins.

**PF:14** ISOLATED BORDERLINE FETAL CEREBRAL VENTRICULOMEGALY – ROLE OF MAGNETIC RESONANCE IMAGING (MRI)

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Objectives To examine the role of third trimester magnetic resonance imaging (MRI) in fetuses diagnosed with isolated borderline cerebral ventriculomegaly at the routine second trimester fetal anomaly scan.

Methods This was a retrospective cohort study of 159 fetuses with apparently isolated borderline ventriculomegaly (9–12 mm) diagnosed at the routine second trimester ultrasound scan at a median of 22 (range 19–24) weeks’ gestation and no additional findings at a repeat scan 6–8 weeks later. Follow up cerebral MRI was carried out at 28–34 weeks and the number of cases in which this investigation demonstrated abnormal findings was calculated. The patients were examined in a tertiary fetal medicine unit between 2005 and 2012.

Results In 7 (4.4%) of the 159 cases the MRI scan demonstrated findings not seen by ultrasound. These included partial agenesis of the corpus callosum (n = 2), delayed sulcation disorders (n = 1), heterotopia (n = 2), germinal matrix haemorrhage (n = 1), and destruction of the septum pellucidum (n = 1).

Conclusions In about 4% of fetuses with apparently isolated borderline cerebral ventriculomegaly an MRI scan demonstrates potentially clinically significant pathological findings.