of Rogers, Fok 2003 and Guangzhou studies but weighted more than those of Woo and Fok 1987 studies. The percentage of SGA neonates was underestimated by Woo (6.0%), Fok 1987 (2.7%) and Fok 2003 (1.8%) percentiles. On the other hands, the percentage of LGA neonates was overestimated by Woo (13.6%) percentiles but underestimated by Rogers (8.8%) and Fok 2003 (2.2%) percentiles.

Conclusions: The new birthweight reference in our study showed a small increase trend in birthweight of term and post term infants especially when compared with older studies. On the other hands, mildly preterm infants in our study weighted less than those from recent studies. It is important to utilise an updated reference to avoid misclassification of SGA and LGA infants in clinical management.

EP19.13
Maternal factors associated with fetal thigh circumference at 36th week of gestation

A.O. Melo[1,2], M.M. Amorim[1,2], M. Pinto-Neta[1], A. Sena[1], A.R. Souza[3], C.F. Dantas[1], J.S. Tavares[1], M.B. Silva[1]

[1]*Saude da Mulher, Instituto de Pesquisa Professor Joaquim Amorim Neto, Campina Grande, Brazil;* [2]*Universidade Federal de Campina Grande, Campina Grande, Brazil;* [3]*Instituto de Medicina Integral Professor Fernando Figueira, Campina Grande, Brazil*

Objectives: To evaluate the association between maternal factors and fetal thigh circumference at the 36th week of gestation.

Methods: A cross-sectional study involving 164 pregnant women/fetuses was carried out. The fetal thigh circumference was evaluated at 36 weeks by ultrasonography performed on a Samsung WS80 Elite, obtaining ultrasonographic cross-section cut of the thigh in the middle of the femur. The image was fixed, enlarged and the circumference of the thigh was measured in millimeters. The biochemical analysis was performed at the 36th gestational week (HDL-cholesterol, LDL-cholesterol, triglyceride, insulin and fasting glycemia). Insulin resistance was determined by HOMA-IR). The pregnant women were submitted to anthropometric evaluation (weight (kg), height (m) and BMI (kg / m2)). The project was approved by the Ethics Committee.

Results: Mean maternal age was 26.6 ± 5.9, ranging from 14 to 43 years. According to pre-gestational nutritional status, 56.6% were classified as eutrophic, 39.5% were overweight / obese and 3.7% were underweight. Gestational weight gain was classified as insufficient in 83.3%, adequate in 9.6% and excessive in 7.0% of pregnant women. The mean fetal thigh circumference was 17 ± 1.8 cm at 36 weeks and was associated with the following maternal variables evaluated at week 36: triglycerides (16.3 ± 1.58 vs 17.3 ± 1.8 m^2, normal vs increased, p $= 0.010$), overweight (16.5 ± 1.48 vs 17.6 ± 1.84 m^2, adequate weight vs obesity, p <0.0001), weight gain (16.6 ± 1.59 vs. 17.5 ± 1.94 vs 17.9 ± 2.23m^2, insufficient vs adequate vs excessive weight gain, p $= 0.003$). Pre-gestational overweight was also associated with fetal thigh circumference at week 36 (16.8 ± 1.61 vs 17.6 ± 1.2 m^2, normal vs increased, p $= 0.005$).

Conclusions: Inadequate maternal weight, before and during pregnancy, was the main factor among the studied variables that remained associated with fetal thigh circumference in the 36th week.

EP19.14
Modified biophysical profile score and middle cerebral artery Doppler as predictor of perinatal outcome in Indonesian tertiary hospital

R.A. Putri, R.I. Amir

Obstetrics and Gynecology, University of Indonesia, Bekasi, Jawa Barat, Indonesia

Objectives: The purpose of this study was to know the significance of modified biophysical profile and middle cerebral artery Doppler (cerebroplacental ratio) in intrauterine growth restriction cases and to correlate with the perinatal outcome thus to offer better strategies for early diagnosis of compromised fetus and timely intervention in Indonesia setting.

Methods: It was a retrospective study of 98 pregnancies with IUGR from January until December 2018 at Cipto Mangunkusumo Hospital. We excluded pregnancy less than 28 weeks of gestational age, multiple pregnancy, PPROM and major congenital anomalies. Adverse perinatal outcome was Apgar at 5 min <7, NICU admission, and pH of umbilical blood gas analysis <7. Sensitivity, specificity, positive predictive values (PPV) and negative predictive value (NPV) of Doppler parameters (cerebroplacental ratio) and modified biophysical profile were calculated after comparing with standard. Comparison of absent end diastolic or reverse end diastolic of umbilical Doppler to perinatal outcome also added.

Results: There were 98 patients with IUGR (8.2%) from 1191 births at January-December 2018 in Cipto Mangunkusumo Hospital, Jakarta, 26 patients had been excluded. Modified biophysical profile was better in predicting neonatal outcome compared with middle cerebral artery Doppler (cerebroplacental ratio) with sensitivity 94.7%, spesificity 52%, and NPV 96.5% for 5 minutes APGAR score <7; sensitivity 76.4%, specificity 55% and NPV 72.4% for NICU admission. Adverse or reverse end diastolic in umbilical artery Doppler had sensitivity 63.15%, specificity 98.1% and PPV 92.3% in predicting 5 minuse APGAR score <7.

Conclusions: Modified biophysical profile shown more specificity, and NPV than middle cerebral artery Doppler (cerebroplacental ratio) in prediction of adverse perinatal outcome.

EP19.15
Abstract withdrawn

EP19.16
Prediction of fetal macrosomia using two-dimensional and three-dimensional ultrasound

E. Mazzone[1], A. Dall'Asta[1], A. Kiener[3], M. Carpano[2], J. Musetti[1], E. Roletti[1], N. Volpe[1], E. di Pasquo[1], A. Commare[1], T. Ghi[1], T. Frusca[1]

[1]*Department of Medicine and Surgery, Obstetrics and Gynecology Unit, University of Parma, Parma, Italy;* [2]*Azienda Ospedaliero Universitaria Parma, Parma, Italy;* [3]*U.C. Obstetrics and Gynecology, University of Parma, Bologna, Italy*

Objectives: The estimation of fetal weight is known to be increasingly inaccurate at advanced gestation and in the case of fetal overgrowth. The objective of this study was to compare the accuracy of two-dimensional (2D) and three-dimensional (3D) ultrasound (US) for the identification of fetal macrosomia at term.

Methods: Single centre prospective study which included women at risk for fetal macrosomia referred for fetal biometry between 34 and 38 weeks. The estimated fetal weight (EFW) was computed using 2D US and the Hadlock Model IV or through 3D US and the Model VI by Lee et al. The projection of the EFW at the time of delivery was performed by using Yudkin's chart percentiles and the gestation-adjusted projection (GAP) method.

Results: Overall, 230 patients were included. A significant correlation between the EFW percentile and the birthweight percentile was found both for the 2D-US-EFW centile (0.654, r^2 0.430, p <0.001) and the 3D-US-EFW centile (0.678, r^2 0.460, p <0.001) as well as for the 2D-US-EFW-GAP and the 3D-US-EFW-GAP (0.600, r^2 0.360, p <0.001 and 0.629, r^2 0.396, p <0.001, respectively). At ROC curve no difference was found in the prediction of birthweight $\geq 90^{th}$ centile using 2D-US-EFW