**Introduction**

Our aim was to evaluate the association between fetal ultrasound and newborn biometry and adiposity measures.

**Methods**

The study population involved 845 overweight or obese pregnant women, who participated in the Standard Care group of the LIMIT randomized trial. The analysis included correlation and linear regression models between the fetal and neonatal measures and effect modification by BMI.

**Results**

At 36 weeks’ gestation, every 1 gram increase in EFW at 36 weeks a/w 0.94 gram increase in birthweight (95% CI 0.88 to 0.99; p< 0.001).

At 36 weeks’ gestation, every 1mm increase in ultrasound HC was associated with a 0.69mm increase in birth HC (95% CI 0.63 to 0.75, p < 0.001). For every 1mm increase in ultrasound AC with a 0.69mm increase in birth AC (95% CI 0.60 to 0.79, p< 0.001).

Fetal and neonatal subscapular SFTM (0.29mm, 95% CI 0.20 – 0.39, p< 0.001) were moderately associated. Fetal abdominal fat mass (AFM) was not associated with neonatal skin fold thickness measurements (0.06mm, -0.03 to 0.15, p=0.203).

There is no evidence that these relationships differed by maternal BMI when assessed using effect modification linear regression.

**Conclusion**

In women who are overweight or obese, fetal ultrasound accurately predicts neonatal birthweight, head and abdominal circumference.