**Objectives**

To examine pregnant women with diagnosed fetus growth restriction with abdominal circumference (AC) under 10th percentile and increased PI>95th percentile of the umbilical artery with a view to finding a link between the average PI from the two uterine arteries above 95th percentile and fetus delivery with weight under 10th percentile.

**Methods**

A prospective cohort study for the period 2012–2016 conducted at the University Hospital Maichin Dom which included 140 patients with IUGR, 84 of whom with pre-eclampsia and fetuses growth restriction and 56 patients with restriction due to placental insufficiency. Healthy controls from 100 patients. Growth restricted fetuses defined by abdominal circumference <10th percentile and umbilical artery PI>95th percentile. Arranged by gestational weeks in three groups - 26-31+6, 32-35+6, >36 gestational week studied sonography (BPD, HC, AC, FL, EFW) and Doppler study. Specificity was calculated for PI uterine arteries.

**Results**

Regarding the PI from the two uterine arteries above 95th percentile for the respective gestational age, we ascertained a specificity in 92.6%, OR 554, p<0.0001 for fetus delivery with weight under 10th percentile.

**Conclusion**

In the current study we ascertained that the average PI above 95th percentile from the two uterine arteries for the respective gestational age is associated with fetus delivery with weight under 10th percentile.