Relationship between placental calcification and estimated fetal weight percentile at 30-34 weeks of pregnancy

Objectives: One of the most difficult challenges to clinicians and researchers is the identification of atrisk fetus. The clinical significance of placental calcifications and its relation to adverse pregnancy outcome are controversial. In the present study, we have evaluated the relationship between placental calcification and estimated fetal weight percentile at 30-34 weeks of pregnancy.

Methods: This cross sectional study was carried out on all pregnant women except of multiple pregnancy admitted to outpatient perinatal center, during October 2016 to September 2018. Estimated fetal weight, umbilical artery PI, middle cerebral artery PI, Cerebroplacental Ratio, right and left uterine artery PI, right and left uterine artery notch were measured at 30-34 weeks of pregnancy. Calcification of placenta with any shape and degree was determined.

Results: In this two years study 739 pregnant women were evaluated for placental calcification. There were 73 patients (10%) with placental calcification, 4% SGA, 24% with at least one abnormal Doppler indices. In placental calcification group there were 30% SGA and 12% with at least one abnormality in Doppler indices. In group with at least one abnormality in Doppler indices there were 56% patients with SGA and 30% with placental calcification.

Conclusions: This study showed that placental calcification is more common in SGA. We have also found that at least one abnormality in Doppler indices was more common in placental calcification and SGA and uterine artery Doppler abnormality is the most common abnormal findings in arterial Dopplers.