Purpose. To establish signs of fetal GRS in SGA to choose the timing of delivery.

Material and methods. The study involved 23 pregnant women in the third trimester diagnosed with SGA. Growth retardation syndrome (GRS) was diagnosed by conventional ultrasound parameters: head circumference, abdominal circumference, head-to-abdomen circumference ratio. Doppler, cardiotocography (CTG), biophysical profile were used for fetal assessment.

Results. 9 fetuses presented asymmetrical GRS, and 8 had symmetrical GRS. By increasing the pulsatility index in umbilical artery or in the presence of oligohydramnios, CTG was performed twice a week, Doppler and measurement of amniotic index weekly. When registering zero or reverse diastolic flow in the umbilical artery, daily fetal monitoring was carried out without the need for delivery. 4 fetuses with asymmetrical GRS and six with symmetrical GRS had critical condition, and therefore surgical delivery was performed at 32-34 weeks. Children were born hypotrophic and having moderate asphyxia (Apgar score 5-6). In 5 fetuses with asymmetrical GRS and 2 fetuses with symmetrical GRS pregnancies lasted until 34-35 weeks. At these terms fetal deterioration was registered and surgical delivery was performed. SGA diagnosis was confirmed after birth. 2 with asymmetrical GRS and 1 with symmetrical GRS in moderate asphyxia were born. Symmetrical GRS was associated with poorer infants' condition. Indication for delivery was low score of biophysical profile and loss of end-diastolic flow. Increased neonatal morbidity as necrotic enterocolitis or fetal bleeding was observed in GRS and Doppler deterioration. Other children without GRS were born at 36-38 weeks with SGA, 3 of which with mild asphyxia (Apgar score 7.2 ± 1.1).

Conclusion. Timely detection of fetal SGA and GRS allow to choose timing of delivery to ensure the best fetal outcome.