Fetal growth restriction is affected by various pathological factors, including maternal, placental and fetal factors. Although the different primary pathophysiologic mechanisms, FGR often have the same final common pathway: suboptimal uterine-placental perfusion and fetal nutrition. The study is to analyze pregnancy risk factors, complications and association with pregnancy outcomes in early and late onset fetal growth restriction.

**Methods**

A retrospective study was conducted including 77 early FGR and 100 late FGR, which birth weight were less than 2.5 kilograms. All pregnancy women filled in a questionnaire including general health, past medical and obstetric history, high risk factors of the pregnancy. Ultrasound evaluation indicators included fetal growth and development, EFW, Doppler indices of UA, MCA, DV and MPI. The pregnancy outcomes of all cases were followed up to fill in the results table, included gestational age and mode of delivery, fetal weight, sex, Apgars scores and NICU admission.

**Results**

Gestational hypertension, placenta umbilical cord factors, fetal abnormalities were common causes in FGR. The incidence of adverse pregnancy outcomes were 86.7% vs 46.2%, 55.6% vs 21.1%, 90.9% vs 83.3% in early vs late FGR respectively. Early-onset FGR had increased adverse pregnancy outcomes than late-onset FGR with gestational hypertension. Compared with no pregnancy complications, Early FGR had increased adverse pregnancy outcomes, and decreased DV-RI.

**Conclusion**

Gestational hypertension often causes adverse pregnancy outcomes, especially in the early-onset FGR. DV flow should be monitored comprehensively as effective parameter in early FGR with pregnancy complications.