Objectives
We monitored the prenatal fetal growth, hemodynamics and neonatal outcome in TTTS twins following laser treatment with intrauterine closure of ductus venous in one fetus to identify the perinatal effects of intrauterine closure of ductus venous.

Methods
The growth and hemodynamics of the twins was monitored by ultrasound every two weeks from 16 weeks. The fetal weight and other indicators, the parameters of DV, MCA, UA, UV were recorded. Copy number variations were detected. Hemodynamics was monitored daily and body weight, relative liver volume was measured weekly after DV closure happened in one fetus at 31 weeks. Cesarean section was performed until 34+4 weeks. After birth, neonatal DV, growth and blood, main organs of the twins were examined. All data was compared retrospectively.

Results
Compared with the fetus with opening ductus venous, in the fetus with closed ductus venous the hemodynamics parameters of MCA, UA and UV kept normal; the body weight and relative liver volume were slightly increased. After birth, ammonia, galactose, total bile acid in blood, coagulation and liver function were also in the normal range; the degree of anemia was less severe, and the main organs developed normally. No clinically relevant CNV was detected prenatally.

Conclusion
Fetus with the third trimester intrauterine closure of ductus venous can keep intrauterine growth more than 3 weeks. The ductus venous closure stimulates the increase of body weight and relative liver volume. Neonatal outcomes are better than the other fetus of the twins with delayed closure of ductus venous who has adverse outcomes like acute respiratory distress syndrome (ARDS) and acute necrotizing enterocolitis (NEC).