Aim: The aim of the study was to analyze causes of perinatal loss in multiple pregnancies.

Introduction: In population rate of multiple pregnancies varies from 0.7 to 1.5%. Multiple pregnancies are complicated by perinatal loss 4–9 times more frequently than singleton pregnancies.

Methods: Retrospective study of medical histories was carried out. Thirty patients with twin pregnancy and perinatal loss of one or both fetuses were included. Thirty (43.3%) twins were mono-chorionic (MC), 17 (56.7%) – dichorionic (DC). At 11–14 week of gestation chorialinity was diagnosed by ultrasound; transvaginal measurement of cervix was performed at 19–21 week; biometry was done to identify degree of fetus’ discordance.

Results: Complications of DC pregnancy: discordant fetal growth – 17 (100%), fetal growth restriction – 7 (41.2%), cervical insufficiency – 4 (23.5%). Discordant fetal growth was diagnosed in 17 DC twins: 8 (47.1%) – <20%, 9 (52.9%) – >20%. 8 (47.1%) patients with discordance >25% had highest degree of fetal growth restriction (estimated fetal weight <5%).

Perinatal loss in patients with DC twins was 61.8% (21 of 34 children). Highest mortality [10 of 21 (47.7%)] was among newborns at 22–27 week of gestation with DC type of placentation: 7 – intrauterine death, 3 died postnatally. Seventeen cases of intrauterine death were diagnosed: 7 (41.2%) – 22–27 weeks, 3 (17.6%) – 28–31 weeks, 5 (29.4%) – 35–36 weeks, 2 (11.8%) – at term.

Complications of MC pregnancy: discordant fetal growth – 13 (100%), twin-to-twin transfusion syndrome (TTTS) – 11 (84.6%), fetal growth restriction – 9 (69.2%), cervical insufficiency – 4 (30.8%). Discordant fetal growth was diagnosed in 13 MC twins: 7 (53.8%) – <20%, 6 (46.2%) – >20%. Four (30.8%) patients with discordance >25% had selective fetal growth restriction.

Perinatal loss in patients with MC twins was 80.8% (21 of 26 children). Highest mortality [13 of 21 (61.9%)] was among newborns at 22–27 week of gestation: all of them died antenatally. Nineteen cases of intrauterine death were diagnosed: 13 (68.4%) – 22–27 weeks, 4 (21.0%) – 28–31 weeks, 1 (5.3%) – 35–36 weeks, 1 (5.3%) – at term.

Conclusion: There were 1.3 times more perinatal losses in MC twins than in DC twins (80.8% vs. 61.8%). Regardless of chorialinity, perinatal losses were observed more frequently at 22–27 weeks of gestation: DC (47.7%) and MC (61.9%) twins. Causes of perinatal loss in DC twins: prematurity – 52.9%, discordant fetal growth (>20%) – 52.9%, fetal growth restriction – 41.2%. Causes of perinatal loss in MC twins: TTTS – 84.6%, prematurity – 76.9%, fetal growth restriction – 69.2%, discordant fetal growth (>20%) – 46.2%.

Reference: