

Outcomes of twins pregnancies in a 9 year-period

Malčák M, Hašlík L, Macková K, Hanulíková P, Kalivodová D, Heřman H, Velebil P, Feyereisl J, Krofta L
INSTITUTE FOR CARE OF MOTHER AND CHILD, Prague, Czechia

Objective

Prenatal and perinatal care for multiple pregnancies requires a specialized approach in obstetrics and neonatology. In 2012, a center for complications in twin pregnancies was launched at the Institute for Care of Mother and Child (ICMC), which resulted in a concentration of these cases. The aim of the work presented is the analysis of selected data of prenatal and perinatal care for twin pregnancies for a period of 9 years.

Methods

Retrospective analysis of twin pregnancies at the ICMC in the period from 2012 through 2020. We surveyed the following parameters: numbers and chorionicity, maternal age categories, representation of spontaneous conception and methods of assisted reproduction in multiple pregnancies and type of multiple pregnancy in relation to age categories as well. Furthermore, the method of childbirth and way of delivery, indications for delivery due to gestational age and the number of surviving fetuses were monitored.

Results

In 2012–2020, 1.460 pairs of twins were born at the ICMC, of which 935 (64.1%) were dichorionic diamniotic, 508 (34.7%) were monochorionic diamniotic and 17 (1.2%) were monochorionic monoamniotic. The age variability of pregnant women with multiple pregnancies was wide. Most multiple pregnancies - 581 (39.8%) - were born to women in the age group 31-35 years, the least (0.6%) in the youngest age group 15-20 years. The oldest age group, 41-56 years, represented 5.4% of twin pregnancies (79). Of the 1460 multiple pregnancies, 444 (30.4%) were after assisted reproductive methods and 1016 (69.6%) were spontaneous pregnancies. Most twins after spontaneous pregnancy (420) were in the age category of patients 31-35 years and most twins after assisted reproduction methods (165) were in the age category 36-40 years. In the age group 31-35 years, the largest number of dichorionic diamniotic pregnancies after spontaneous conception was 255 (27.2% of all Di/Di), while in the group 36-40 years there were 134 (14.3% of all Di / Di) dichorionic diamniotic pregnancy after assisted reproduction techniques. Among the monochorionic diamniotic pregnancies, the 31-35 age group clearly dominates, with 165 (32.5% of all Mo/Di) pregnancies after spontaneous conception and 43 (8.5% of all Mo/Di) pregnancies after assisted reproduction methods. Out of the total number of 935 dichorionic diamniotic twins, 879 pregnancies (94%) were delivered by caesarean section and 56 pregnancies (6%) ended in spontaneous delivery. The highest number of pregnancies (498 or 53.3%) was delivered after 36⁺⁰ weeks of pregnancy. The number of pregnancies delivered by week 25 + 6 was 25 (2.7%). The most common indication for termination of pregnancy was the medical indication before delivery - 290 (31%) - due to intrauterine deterioration of twins (change in flow parameters, growth discrepancies). Another large group is the termination of pregnancy according to the recommendations of the guidelines - 272 (29.1%). A significant number of indications for termination of pregnancy fall into the group of premature amniotic fluid outflow - 168 births (18%) and spontaneous premature birth - 163 (17.4%). 921 pregnancies (98.5%) ended in the birth of two live fetuses, 1 case (0.1%) ended in the death of both fetuses. There were 12 (1.3%) spontaneous deaths of one fetus, while the other fetus was born alive. Intrauterine performance with termination of pregnancy resulting in one live fetus was just 1 (0.1%). The average weight discrepancy in postpartum growth was 12%, the highest weight discrepancy was 70%. Out of the total number of 525 monochorionic twins, 508 (96.8%) pregnancies gave birth by caesarean section, the number of spontaneous deliveries was 17 (3.2%). The highest number of pregnancies in the number of 271 (51.6%) was terminated in the range of 31 + 6 - 35 + 6 weeks of pregnancy. The number of pregnancies terminated by week 25 + 6 was 22 (4.2%). The most common indication for the termination of pregnancy was the medical indication before the due date - 383 (73%). Another large group belongs to the group of premature amniotic fluid outflow - 74 births (14.1%). Spontaneous onset of preterm birth was present in 49 births (9.3%). Termination of pregnancy according to the recommended guidelines - 14 pregnancies (2.7%), term spontaneous onset of labor in case of 4 pregnancies (0.8%), and term outflow of amniotic fluid in case of 1 pregnancy (0.2%). 487 pregnancies (92.8%) were terminated by the birth of two live fetuses, 5 cases (1%) resulted in the death of both fetuses. The number of spontaneous deaths of one fetus, while the other fetus was born alive, was 5 (1%). The number of intrauterine procedures with delivery of pregnancy with one live fetus was 28 cases (5.3%). The total number of intrauterine procedures was 76 (14.5% Mono twins). The average weight discrepancy after birth was 15%, the highest weight discrepancy was 79%.

Conclusion

Multiple pregnancies belong to the group with a high risk of fetal and maternal complications and a high risk of prematurity. The method of conception, the type of twin pregnancy, the age of the mother, her health and comorbidities significantly affect the course and complexity of pregnancy. Therefore, specialized care is needed in a modern institution with the ability of early diagnosis, accurate monitoring of pathological changes in the fetus and a suitable solution, including excellent cooperation with the neonatology team.