

Maternal and Perinatal Outcomes in Monochorionic Twin Pregnancies A Retrospective Study from a Tertiary Hospital in Spain over a Decade.

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Objectives

To describe perinatal and maternal outcomes in a cohort of 10 years monochromic twin pregnancies, focusing on the detection of classic monochorionic complications such as twin-to-twin transfusion syndrome (TTTS), selective fetal growth restriction (sFGR), twin anemia-polycythemia sequence (TAPS) among others, managed in a tertiary hospital.

Methods

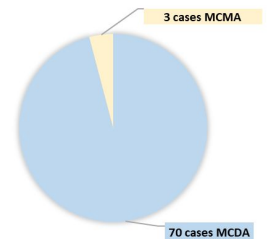
This was a retrospective cohort study including women with monochorionic twin pregnancy follow-up in our Fetal Medicine Department at Parc Taulí University Hospital in Barcelona, Spain, from January 2012 to December 2022. All pregnancies have followed-up in a specific outpatient clinic.

Most of them were delivered at Parc Taulí University Hospital in Barcelona except for 3 cases, which were transferred to a referral fetal surgery center due to severe complications. Pregnancy follow-up and perinatal data were extracted from medical records to assess the rate of fetal anomalies, fetal complications, fetal surgeries, gestational age at delivery, type of delivery, and neonatal morbidity. We excluded singleton pregnancies, dichorionic twin pregnancies and lack of data when reviewing the medical record.

Results

During the last ten years, a total of 435 twin pregnancies were delivered at Parc Taulí University Hospital. The 0.17% (73 cases) of these pregnancies were monochorionic which 70 cases (96%) were monochorionic diamniotic twin (DCDA) pregnancies and 3 were monochorionic monoamniotic twin (MCMA) pregnancies.

Out of all the recorded cases of monochorionic twin pregnancies, it was found that 20% of the women developed gestational diabetes, whereas 16% of the women developed hypertensive disorders during their pregnancy.



Fetal complications	
sFGR (small-for-gestational-age)	15
TTTS (twin-to-twin transfusion syndrome)	5
TAPS (twin anemia-polycythemia sequence)	1
Twin reversed arterial perfusion sequence	1
Single intrauterine fetal death	1

Regarding fetal complications, sFGR was present in 15 cases, TTTS in 5 of which 3 of them required fetal invasive surgery. There was one case of TAPS, one case of twin reversed arterial perfusion sequence and one case of spontaneous single intrauterine fetal death.

Asymmetry of amniotic fluids (no TTTS) was observed in 17 cases (23%).

A structural malformation was diagnosed in 9 fetuses of the 73 pregnancies (12.3%), mostly for a cardiovascular anomaly (n=3), and urogenital anomaly (n=4). Other structural malformations detected were congenital talipes equinovarus (n=1) and congenital cystic adenomatoid malformation (n =1).

Conclusions

Monochorionic twin pregnancies are associated with a higher risk of complications, particularly preterm labor, which is often accompanied by significant perinatal morbidity.

However, with appropriate monitoring and timely interventions, these complications can be identified and addressed early, leading to improved outcomes for both the mother and babies.

It is crucial to provide comprehensive prenatal care for women carrying monochorionic twins, in order to reduce the risk of adverse outcomes and ensure the best possible maternal and neonatal outcome.

Mean gestational age (GA) at delivery was 34 weeks. In 39 cases (53%) of the patient had a vaginal delivery, 3 cases required a caesarean section of the second baby due to fetal bradycardia.

Preterm labor was the commonest maternal complication occurring in 65% of cases.

One of the most prevalent neonatal morbidity was respiratory present in 28 cases (38%), being directly related to prematurity and required an admission to the Neonatal Unit.

Only one neonatal death was reported due to extreme prematurity acute complications.



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