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Case Report

Case report on monochorionic diamniotic twins with gestational hypertension

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ABSTRACT

Monochorionic diamniotic twins share a single placenta, posing increased risks for complications such as twin-twin transfusion syndrome, preëclampsia and gestational hypertension. The presence of gestational hypertension in MCDA pregnancies adds complexity to maternal and fetal management.
This case report aims to describe the management and outcomes of a patient having MCDA twins with gestational hypertension. A 28-year-old G5P3L3A1 at 28 weeks of gestation, developed hypertension, which resulted in a difficult clinical course. Ultimately, at 39 weeks + 4 days of gestation, the twins were delivered by standard vaginal delivery. The patient was managed with antihypertensive medication and maternal monitoring for signs of preeclampsia. This case report demonstrates that, with diligent monitoring and appropriate management, it is possible to mitigate some of the adverse effects of gestational hypertension on MCDA twin pregnancies. This serves as a beacon of hope for healthcare providers and families facing similar complex scenarios.

Keywords: MCDA twins, Hypertension, Fetal surveillance, Antenatal monitoring, Ultrasound

INTRODUCTION

China's "two child" policy has resulted in an annual increase in the number of multiple pregnancies, particularly twin pregnancies. As the age of conception rises and assisted reproductive technology becomes more commonly employed, multiple pregnancies become morecommon.[1] However, compared to women who have only one pregnancy, women who have several pregnancies are more likely to experience pregnancy problems, fetal deformities, neonatal morbidity, and mortality. This has created a difficult problem in the field of maternal and fetal medicine. In comparison to singleton pregnancies, twin pregnancies have a 2-3 times higher incidence of gestational hypertension, which also presents atypically and starts earlier, progresses more quickly, and is more severe.[2] The likelihood of maternal disorders causing placental abruption and pathological caesarean delivery is higher. These diseases include those that affect the terminal organs and include cardiac arrest, stroke, renal failure, lung injury, and others. Fetal problems include, but are not limited to, premature delivery, stillbirth, and fetal growth restriction.[3]

Genesis of twins

Diazygotic or fraternal twins are other names for binocular twins. They arise from the fertilization of two ova by two sperms during a single ovarian cycle. The ova were most likely burst from two separate graafian follicles, typically of the same or one from each ovary. They mature and are subsequently implanted similarly to a single fertilized ovum. Identical or monozygotic twins are other names for uniovular twins. One ovum and one spermatozoon give rise to them, and they twine at various times following fertilization. As a result, two embryos will develop that are separated by a single amniotic sac

(monochorionic, diamniotic), a single placenta, and two chorions.[4]

Complications

Premature rupture of the membranes, polyhydramnios, fetal abnormalities, malpresentations, pre-eclampsia, and malpresentations are among the complications of multiple pregnancy. the cord's prolapse, extended work, Locked twins, delayed delivery of the second twin, early placental discharge, and postpartum hemorrhage.[4]

Antenatal advices

In order to prevent premature labor and other difficulties, it is advisable to stop working early and increase rest at home. An increase in nutritional supplements is also necessary for an improved energy supply. Multiple gestations require more iron, folic acid, vitamins, and calcium. Prenatal visits should occur more frequently in order to identify any signs of anemia as soon as possible. Every two to three weeks, fetal growth evaluation needs to be completed.[5]

CASE REPORT

At 39 weeks+4 days of gestation, a 28-year-old female patient was admitted to a tertiary healthcare center. She was Grand Multipara (Gravida 5, Parity 3, Live 3, Abortion 1) and in active labor. After a Level II ultrasound at 21 weeks gestation, it was determined that she was carrying twins. While F2 was presenting breech and had heart activity and fetal movements, F1 was presenting cephalic. She did not have proteinuria when she was diagnosed with gestational hypertension (150/100 mmHg) at 28 weeks of gestation. Patient began taking 20 mg of Lobet, OD. She arrived complaining of body itchiness at 39 weeks gestation and was in the midst of labor. Additionally, the blood pressure rose to 154/102 mmHg. Lobet 20 mg was administered, and blood pressure was continuously monitored. Twins were delivered by the patient.

DISCUSSION

Preeclampsia, prenatal hypertension, chronic hypertension, and chronic hypertension with superimposed preeclampsia are among the hypertensive diseases of pregnancy (HDP).[6] Around the world, 5–10% of expectant mothers have HDP, which has a negative impact on both the mother and the fetus.[7] It is the second most frequent cause of maternal mortality globally. Around 76 000 maternal and 500 000 prenatal deaths worldwide were attributed to HDP each year.[8] A 2019 World Health Organization (WHO) report states that 295 000 maternal fatalities worldwide were reported in 2017 as a result of pregnancy and childbirth-related factors.[9] The primary reasons for the rise in twin pregnancy rates are the aging of mothers following the introduction of novel contraceptives and infertility therapies.[10] he presence of twins has a detrimental effect on perinatal health indicators. Since twins are more likely to experience perinatal death, particularly because of a higher prevalence of preterm deliveries, twin births have a detrimental effect on perinatal health indices.[11] Twins have an early infant mortality rate that is seven times greater in low- and middle-income countries.[12] Numerous studies have revealed that the second twin's neonatal mortality and morbidity are greater than those of the first.[13] Furthermore, compared to single pregnancies, cases of twin deliveries have greater rates of maternal death and morbidity.[14]

Twin mothers were found to be three times more likely to experience a maternal near miss, according to a comprehensive study that was mostly carried out in low- and middle-income nations. Due to postpartum hemorrhage and hypertensive condition in particular, the same group of women were thought to be four times more likely to experience maternal death.[15] When twins were pregnant—either the first or second twin—the likelihood of having a low 5-minute Apgar score was three times higher than when singletons were pregnant. When comparing the two twins, it was also 1.3 times greater for the second.[16]

CONCLUSION

In conclusion, our case report illuminates the intricate challenges and critical considerations in managing monochorionic diamniotic (MCDA) twin pregnancies complicated by gestational hypertension. The shared placenta and vascular connections between the twins make them particularly susceptible to the detrimental effects of hypertension on both maternal and fetal health.

Managing MCDA twins with gestational hypertension necessitates a multidisciplinary approach involving obstetricians, maternal-fetal medicine specialists, and neonatologists. Collaborative decision-making and shared expertise are essential to ensure the best possible outcomes for both the mother and the foetuses. This case report demonstrates that, with diligent monitoring and appropriate management, it is possible to mitigate some of the adverse effects of gestational hypertension on MCDA twin pregnancies. This serves as a beacon of hope for healthcare providers and families facing similar complex scenarios.

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