

## **Title**

Six Week Interval Delivery of Di-Di Twin Gestation Leading to Placental Abruption and Post-Partum Hemorrhage

## **Authors**

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## **Background**

Multiple gestation is a known risk factor for preterm birth. (1) Preterm premature rupture of the membranes (PPROM) complicates 3% of pregnancies and is responsible for approximately one third of all preterm births. (2) Delayed delivery has been demonstrated to increase the likelihood of survival and decrease morbidity among the latter-born siblings. Despite the risk of complications, data supports therapeutic interventions aimed at delayed delivery of subsequent fetuses in cases with the potential for significant morbidity and mortality. (3) Post-partum hemorrhage (PPH) is a major cause of pregnancy related death in both developed and non-developed countries and, in addition, is the highest cause of obstetric disease specific morbidity. (4)

## **Objective**

This case illustrates an exceptionally high-risk course spanning the prenatal, intrapartum, and postpartum periods. The decision to pursue delayed interval twin delivery required a multifaceted management approach. In such complex scenarios, the standard of care may not always represent the safest option—particularly when maternal risk escalates. This case underscores the importance of individualized care, as the patient, a mother of two, faced multiple life-threatening emergencies in an effort to prolong the pregnancy.

## **Method:** Case Report

## **Results**

A 39-year-old G3P2012 presented to her OB/GYN at 18 weeks 2 days carrying Di-Di twins with painless cervical dilation and bulging membranes. She was sent to the hospital and shortly ruptured the membranes of Baby A with delivery at 18w5d. The placenta remained in situ. The patient left against medical advice secondary to childcare needs at home. She was followed twice weekly as an outpatient for three weeks. Baby B remained alive and well until 24w3d when she presented with placental abruption and was delivered via emergent cesarean section. Her post-partum course was complicated by hemorrhage where uterotonics were not enough and a uterine balloon was placed which finally controlled the bleeding. The patient was discharge on post-operative day 3. However, the baby was discharged after 4 months in the NICU with many outpatient physician appointments.

## **Conclusion**

This case exemplifies the delicate balance between risk and benefit in obstetric care. The patient presented with a rare and serious complication: painless cervical dilation in a pre-viable di-di twin gestation, accompanied by bulging membranes. Following the delivery of Baby A, every effort was made to delay the birth of Baby B.

Currently, delayed interval delivery is defined as every attempt to postpone birth of the second twin. (5). Obstetric management has evolved to include active management using tocolysis and prophylactic antibiotics (8) both of which were appropriately employed in this case. These measures successfully extended the pregnancy, allowing Baby B to reach a viable gestational age.

However, the risks associated with this approach are substantial. Delayed interval delivery carries the potential for severe complications including chorioamnionitis, placental retention, post-partum hemorrhage, and abruptio placentae (5). Tragically, the patient suffered from three out of these four complications. The associated mortality rates being up to 10% maternal with retained placenta (6), 9-12% perinatal with placental abruption (7), and 8% maternal with post-partum hemorrhage (8).

This raises a critical ethical question: had the patient lost her life, would the delay of Baby B's delivery have been justified? She is a mother of two other children. Her survival was not just a medical priority, but a familial necessity. While delayed delivery is considered standard of care, this case challenges whether that standard remains appropriate when maternal survival is at stake.

Ultimately, this case underscores the necessity of a multifactorial approach to management. Key considerations must include thorough patient counseling, respect for the patient's values and desires, and close collaboration between the primary OB-GYN and maternal-fetal medicine specialists.

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