

Late presentation Spontaneous Twin-anaemia-polycythemia-sequence in monochorionic-diamniotic Pregnancy with sinusoidal CTG trace.

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Case report

Objective

This case report highlights an undiagnosed late presentation of Twin Anemia Polycythemia Sequence (TAPS) in a monochorionic diamniotic (MCDA) twin pregnancy at 35+6 weeks gestation, emphasizing its implications on antenatal monitoring, delivery plan and neonatal outcomes.

Case Report

A 27-year-old G2P1 presented at 35+6 weeks with reduced fetal movements in an MCDA twin pregnancy. She was regularly monitored with anomaly ,growth and uterine artery Doppler scans from 16 weeks. Her course was uncomplicated until presentation, with no evidence of twin-to-twin transfusion syndrome and minimal growth discrepancy. On admission, cardiotocography (CTG) revealed a sinusoidal pattern for Twin 2, prompting a category 1 cesarean section. Twin 1 was born with a weight of 2.0 kg (62nd centile) and arterial blood pH of 7.35. Twin 2, delivered breech, was pale, born flat, and required immediate resuscitation. Both twins were admitted to the neonatal intensive care unit, with Twin 2 transferred for blood transfusion due to anemia consistent with TAPS. The mother’s estimated blood loss was 1500 mL, necessitating high dependency care postpartum.

Unlike TTTS, TAPS arises from small artery-to-vein connections leading to chronic hemoglobin inequality between the donor and recipient twins.This case highlights the late presentation of spontaneous TAPS in uncomplicated MCDA twins, undiagnosed until the late third trimester.

Both mother and babies recovered well post-delivery, with ongoing neonatal follow-up.

Discussion

This case underscores the high vigilance for spontaneous TAPS in otherwise uncomplicated MCDA pregnancies. The late presentation TAPS with CTG concerns highlights the need for high clinical suspicion. Early recognition and immediate delivery in cases of fetal compromise are critical to mitigating neonatal morbidity and mortality. Current NICE guidelines do not recommend routine TAPS screening for uncomplicated twin pregnancies unless complicated by fetal growth discordance or post-fetal laser therapy. However, 1-5% of MCDA twins develop spontaneous TAPS, often diagnosed postnatally. The donor twin is at risk of neurodevelopmental delay in up to 17% of cases, with a perinatal mortality rate of 15%. These findings emphasize the need to reconsider screening protocols. Notable, the Society of Maternal-Fetal Medicine encourages routine middle cerebral artery (MCA) Dopplers in the second trimester for MCDA twins to enhance early detection.

Conclusion

This case demonstrates the unpredictable nature of acute TAPS and its potential implications on antenatal care and delivery management. Future research should explore early markers and frequency of screening of TAPS to improve detection and guide timely intervention.

References

1.Society for Maternal-Fetal Medicine Consult Series #72: Twin-twin transfusion syndrome and twin anemia-polycythemia sequence
Miller, Russell S. et al.
American Journal of Obstetrics & Gynecology, Volume 231, Issue 4, B16 - B37

2.Society for Maternal-Fetal Medicine Consult Series #72: Twin-twin transfusion syndrome and twin anemia-polycythemia sequence
Miller, Russell S. et al.
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