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Hapless Foetal Outcome in Twin-Twin transfusion syndrome: A case report

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Abstract
Twin-Twin transfusion syndrome (TTTS), a complication of Monochorionic twin gestation is a worldwide cause of perinatal mortality, with a high incidence of impairment in surviving twins. We report a recent case of TTTS at 28 weeks resulting in poor outcomes after birth.

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Introduction

Twin-Twin transfusion syndrome also known as chronic feto-fetal transfusion syndrome is a condition that complicates up-to 15% of MC twin pregnancies where there is a remarkable imbalance in blood flow between twins due to vascular connection in placenta known as placental vascular anastomosis [1] This imbalance leads to donor twin having decreased blood flow causing growth restriction, producing less urine and amniotic fluid. However, the recipient twin produces more urine with associated excessive amniotic fluid and eventually develops hydrops fetalis and death. Despite having great knowledge about TTTS; exact pathogenesis is still unclear [2]. Our case reports a hapless perinatal outcome of twin twin transfusion syndrome. Informed consent was taken.

Case presentation

This case reports a 28-year-old pregnant woman G2P1(Previous I) at 28^{+2} weeks with Monochorionic Monoamniotic twin gestation; who had routine antenatal check-ups at our hospital setting (Shaikh Zayed Hospital, Lahore, Pakistan), was admitted through Outpatient clinic for feto-maternal monitoring due to TTTS on ultrasound. She was chronic hypertensive and already commenced on tablet methyl dopa. Her ultrasound was done fortnightly for strict surveillance and showed concordant growth according to fetal maturity until 26 weeks, which showed discordance on scan. Her ultrasound findings were twin 1- with maturity of 27 weeks and twin 2 – with maturity of 25 weeks, no other associated abnormalities were present. Hence, patient was closely monitored with fortnightly Doppler scan. At 28 weeks, umbilical artery Doppler findings were severely impaired and showed twin 1- with maturity of 29^{+6} weeks, abdominal circumference of 37 weeks, SD ratio 6.6 and massive oedema around body, head along with massive abdominal ascites, pericardial effusion and hydrocele suggesting hydrops fetalis; Twin 2 – with maturity of 24^{+1} weeks and umbilical artery SD ratio of 4.8. Raised SD ratio of both foetuses suggested fetoplacental insufficiency. (Quintero staging 4). On examination her BP was 130/ 80mmHg (well controlled hypertension), urine albumin Nil. On per abdominal examination, symphysis fundal height of 34cm noted. She was given steroid cover for foetal lungs maturity. Following day, patient underwent Emergency lower segment caesarean section due to suspected foetal compromise on cardiotocography and delivered grossly discordant monochorionic monoamniotic twins.

Twin 1 - larger and oedematous, a baby boy of 3 kg as cephalic with Apgar score 3/10, 3/10, 2/10. Twin 2 - growth restricted baby boy of 0.3 kg delivered as cephalic with Apgar score 4/10, 3/10 at 1 and 5 minutes. Liquor was excessive and meconium stained. The hydrop twin died immediately after delivery whereas twin 2, growth restricted baby died at 3rd day of life due to severe prematurity.

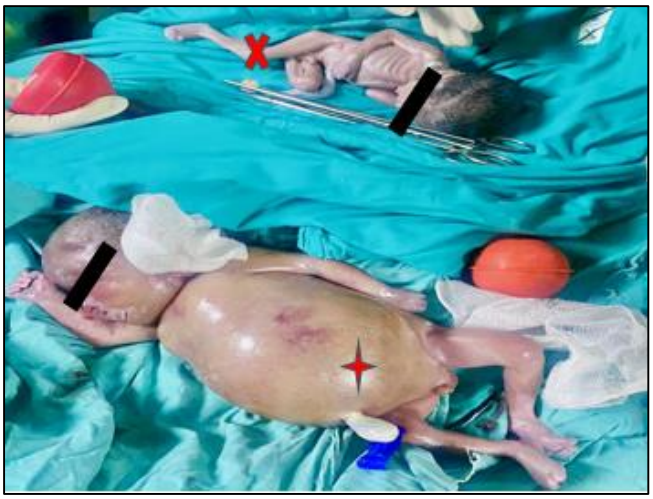

Fig 1: Grossly discordant Monochorionic Monoamniotic twins.

- **Twin 1:** Baby boy of 3 kg -Hydrops
- **Twin 2:** Baby boy of 0.3 kg- - Growth Restricted

Discussion

Mono chorionic twins are more likely to have obstetric and neonatal complications then dichorionic twins.**Error! Bookmark not defined.** Several markers for screening are used, but current practice is regular ultrasound surveillance from 16 weeks onwards fortnightly intervals [3].

Twin Twin transfusion syndrome presents in various ways ranging from mild disease with only discordant amniotic fluid to severe disease with neurological impairment and fetal demise. Staging system (Quintero staging) has been described to predict prognosis. Current management of twin twin transfusion syndrome favours amnio reduction or expectant management for stage one and laser ablation of communicating vessels for stage 2 and 4.**Error! Bookmark not defined.** Twin twin transfusion syndrome most commonly occurring between 16 and 26 weeks if left untreated, it leads to loss of 1 or both twins. However, in our case study twin twin transfusion syndrome occurred suddenly at 28 weeks with previously unremarkable ultrasound findings. Although there was close surveillance by fortnightly ultrasound and patient was highly compliant but outcome remained poor due to both unaffordability and unavailability of modern modalities in local setup. Our case corresponds with Romi Bansals case report in which there is poor outcome associated with twin twin transfusion syndrome [4].

Conclusion

Twin twin transfusion syndrome is unpredictable in progression. Although close monitoring in monochorionic twin pregnancy is important with knowledge to newest available procedures however their non-availability may lead to poor pregnancy outcomes.

References

1. James DK. High-risk pregnancy: management options. Cambridge, United Kingdom ; New York, Ny, Usa: Cambridge University Press, 2017.
2. Lopriore E, Middeldorp JM, Sueters M, Vandenbussche FP, Walther FJ. Twin-to-twin transfusion syndrome: from placental anastomoses to long-term neurodevelopmental outcome. Current Pediatric Reviews. 2005; 1(3):191-203.
3. Nicholas L, Fischbein R, Ernst-Milner S, Wani R. Review of international clinical guidelines related to prenatal screening during monochorionic pregnancies. Journal of Clinical Medicine. 2021; 10(5):1128.
4. Bansal R, Kaur J, Priyanka. Twin-Twin transfusion syndrome: a case report. International Journal of Reproduction, Contraception, Obstetrics and Gynecology. 2020; 9(3):1282.