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Case Report: Twin - Twin Transfusion Syndrome Stage 3

Priyadarshini Kulkarni[1], Rekha N.[2]

[1]Junior Resident, Department of Obstetrics and Gynaecology, BGS Global Institute of Medical Sciences, Bengaluru, Karnataka

[2]Professor and Head, Department of Obstetrics and Gynaecology, BGS Global Institute of Medical Sciences, Bengaluru, Karnataka

Abstract: ***This case report details a rare instance of Twin - Twin Transfusion Syndrome TTTS at Stage 3 in a 31 - year - old woman with a monochorionic diamniotic MCDA twin pregnancy at 26 weeks gestation. Despite a history of two uneventful full - term pregnancies, the patient presented with abdominal pain and was subsequently admitted for evaluation. The diagnosis of TTTS was confirmed through an obstetric scan showing significant discordance between the donor and recipient twins in terms of amniotic fluid volume and fetal growth. Management included induction of labor, resulting in the birth of both twins with notable weight discrepancy. This report underscores the critical importance of early detection and the challenges of managing TTTS, particularly in the context of its high perinatal mortality rate and the specific interventions required for different stages of the syndrome.***

Keywords: Twin - Twin Transfusion Syndrome, Monochorionic Diamniotic Twins, Perinatal Mortality, Gestational Management, Fetal Therapy

1. Introduction

Twin - Twin transfusion syndrome is rare but serious complication of multiple pregnancies that affects 10 - 15% of all monochorionic twins1. Overall incidence of perinatal mortality irresecpective of gestational age is 60 - 70% and is almost 100% before 26 weeks.

2. Case Report

31 year old, Mrs Radha, G3P2L2 with 26 weeks GA with MCDA twin gestation with previous 2 normal full term vaginal uneventful deliveries, came with complains of pain abdomen since 3 days. No complains of fever, vomitting, loose stools, bleed pv, leak pv. Patient was booked elsewhere and came to BGS GIMS for the first time. She was admitted for further evaluation. On examination - Patient is conscious, oriented. PR - 90 bpm BP - 120/80mmhg SPO2 - 97. Pallor, Pedal edema absent. Systemic examination - NAD. Per abdomen examination - Uterus 36 weeks size, multiple fetal parts felt, both twin FHS present. Per vagina examination - Cervix - soft, posterior, 1 finger loose, pelvis adequate.

3. Ultrasound Findings

Obstetric scan at 18 weeks showed - MCDA - TTTS stage 3. [Donor twin - oligohydramnios, adherent (stuck), absent bladder, umblical vein pulsatile flow, 500 gms. Recepient twin - Polyhydramnios, hydrops, 1kg]. Routine blood investigations were normal. After taking consent, Induced with with 1 st dose of dinoprostone. Bishops score – 3/13, with induction delivery interval of 8 hours, delivered twin 1 [recipient] of 900 gms, and twin 2 [donor] of 400 gms at an interval of 1 min.

Figure 1: Left Twin - Donor Twin
Right Twin - Recepient Twin

Figure 2: Monochorionic Diamniotic Placenta

4. Discussion

Twin to twin transfusion syndrome arises from unbalanced anastomotic connections in single, shared cotyledons of placenta and is usually arteriovenous but may be arterio - arterial.[2, 3]. This imbalance results in a shunting of blood from high pressure arterial circulation of one twin called the donor, to low pressure venous system of other twin called the recipient[4].

Due to chronic hypovolemia, the donor twin becomes growth retarded, anaemic and produce little urine. This results in oligohydramnios. Recipient twin suffers from Polycythemia, Severe hypervolemia, Congestive cardiac failure, Plethora, Polyhydramnios, Hydrops[5].

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