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A COMPARATIVE STUDY OF SINGLE FETAL DEMISE IN TWIN PREGNANCIES A GRAVE CONCERN BUT STILL A FAVOURABLE OUTCOME

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ABSTRACT

Aim & Objective: To study the maternal and fetal outcome in twin pregnancy with single intrauterine fetal demise.

INTRODUCTION: Single fetal loss of a twin pregnancy during the first trimester is not an uncommon event and seems not to impair the further development of the survival one and In contrast, the death of a twin in the late second or third trimester of pregnancy is a rare obstetric complication associated with increased maternal and fetal morbidity and mortality[1]. This might pose management challenge to the obstetricians. It is a cause of great concern and psychological stress to the patient and her relatives[3]. single intrauterine fetal demise in the second and third trimesters places the co-twin at substantial risk, including preterm delivery and associated comorbidities of prematurity such as pulmonary hypoplasia, necrotizing enterocolitis, long-term neurological complications, and neonatal death [2]. Maternal coagulopathy has been reported to occur in 3-5 weeks following fetal death. So, maternal clotting profile should be reassessed every 2-3 weeks when the fetal demise occurs after first trimester[3]. In this article, we are going to present 2 cases of twin gestation with single intrauterine fetal demise where one case was delivered immediately on admission and the other case was managed conservatively and delivered after the patient goes into spontaneous labour.

Conclusion: The primary concern for single fetal demise in a twin pregnancy is its effect on the surviving fetus and mother. Regular antenatal care and routine ultrasonography in pregnancy are needed to make a diagnosis. Close monitoring of the wellbeing of the surviving twin and coagulation profile of the mother are crucial to manage possible complications. Proper counselling and management will result in a successful outcome.

Key words: Twin pregnancy, single intra uterine fetal demise, fetomaternal surveillance

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Single fetal loss of a twin pregnancy during the first trimester is not an uncommon event and seems not to impair the further development of the survival one and In contrast, the death of a twin in the

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We present two cases with single fetal demise. Death of one of the two fetuses occurred at 28 weeks of gestation in the first case and at 30 weeks in the second case. Both patients were managed conservatively with close fetal monitoring and serial assessment of mother's clotting profile. For the first patient Cesarean section was done at 32.6 as there were doppler changes in sonography of the survival twin and the other patient who had known co morbidities like gestational hypertension and gestational diabetes mellitus pregnancy was continued till 37week and the patient was delivered normally. . A fetus papyraceous was found in the first case. Both the cases were dichorionic diamniotic pregnancies with no maternal and fetal complications during pregnancy or the post partum period.

CASE 1

A 32 year old, gravida 2 para 1 live 1 came to our hospital with 8 months of gestation with complaints of decreased fetal moments since 1 day and a scan with twin gestation in which one foetus was alive with dopplaer changes and another baby was IUD. LMP- 16/2/22 EDD- 23/11/22 BD- 32.6 Obstetric historyH/O ML- 10 years.P1L1- FCH|7 yr|FTND|2.4 kg G2-present pregnancy spontaneously conceived H/o present pregnancy: first known spontaneous conception
First trimester:Confirmed pregnancy by UPT at home
Dating scan at 7.4 wks shows 2 live intrauterine gestation, started folic acid in 1st trimester NT scan done at 11.3 wks shows 2 intrauterine gestation fetus 1 NT-1.3 mm & fetus 2 NT- 1.5 mm. It shows DCDA twin.
2nd trimester:Quickening felt at 5MOG
Iron and calcium regularly taken, two doses of TT taken , anomaly scan was done at 2wks of gestation and found to be normal
3rd trimester:At 30 wks scan was done, fetus A was live and FHR was present,Fetus B was an intrauterine demise,transverse lie,spalding sign present
Patient came to our hospital with complaints of decreased fetal movments since 1 day, Scan was done on admission
At 32 wks of gestation, a scan was done which showed DCDA
Fetus A: Ux- AFI- adequate, GA by age- 31.6 weeks, Rt uterine artery shows reduced forward diastolic flow and increased resistance. Mean uterine PI > 99th centile uteroplacental insufficiency.
Fetus B: intrauterine demise, transverse lie, spalding sign noted, abdominal content cannot be made out likely to be macerated.
Patient was Vitally stable

- P/A:uterus-full term,multiple fetal parts palpable on both the flanks,FHR present on maternal right -140/mim,relaxed
- P/V: os closed

Patient's clotting profile was sent .On request of patient along with consultation with pediatrician and NICU counselling, patient was taken for emergency LSCS and preterm baby was delivered, baby cried immediately after birth and handed over to pediatrician and shifted to NICU. The other twin baby was found to be macerated. Placenta was delivered and it was dichorionic.

No complications were observed in post op period.

Case 2:

- A 22 yr old female, a homemaker primigravida with nine months of gestation with a known case of gestational hypertension since 3rd month of gestation and gestational diabetes mellitus since 8th month of gestation with complaints of PV leak since 30 minutes with pain abdomen since 1 hour.

LMP:13/2/22. EDD:20/11/22. BD:37.she was admitted in the ward with us since 34 weeks of gestation

OBSTETRICS HISTORY:. Married life 1.5years. Primigravida :Present pregnancy:

- **First trimester-** spontaneous conception , confirmed pregnancy by urine pregnancy test at home after missed period. Dating scan was done at 6wk. It is suggestive of Dichorionic diamniotic twin live intrauterine gestation of twin A 6.2wk and twin Bis 6.3wk. Started folic acid in first trimester.No history of nausea and vomiting/fever with rash/radiation exposure/UTI/drug intake/PV bleeding.
- NT scan was done at 14.2wk and 14wk. FetusAis 14.2wk NT 1.68mm, nasal bone present,ductus flow normal, no TR,placenta posterior. Fetus B is 14wk NT 1.49mm, nasal bone seen, ductus flow normal , no TR,placenta posterior
- **2nd TRIMESTER**. Quickening felt at 5th month. Tablet iron and calcium taken regularly. 2 doses of tetanus toxoid given 1 month apart in second trimester. Anomaly scan was done. Dichorionic diamniotic twin live pregnancy in variable lie of average maturityof 21.1wk and 21.3wk
- **3rd TRIMESTER:** On ultrasonography was done suggestive of twin pregnancy with foetus B showing intrauterine demise with spalding sign positive. FetusAis cephalic presentation with 30.3wk maturity. The doppler is essentially within normal limits

On review ultrasonography after 1 week ,which was suggestive of twin.FetusAon maternal right side of 31.1wk maturity.. No other obvious anomalies are seen except persistent right umbilical vein incidental finding. Fetus B on maternal left side IUD/ intrauterine demise of fetus B. Mild fetoplacental insufficiency.

- Biweekly doppler and intense fet maternal surveillance was done for the patient
- Latest scan was suggestive of twin intrauterine gestation. Fetus A on maternal right side of 37.3wk maturity.. No other obvious structural anomalies are seen except persistent right umbilical vein.. Fetus B on maternal left side intrauterine demise. Cerebroplacental in ratio is 1.1 suggestive of fetoplacental insufficiency.
- PAST HISTORY. History of cervical encerclage at 7th month of gestation.
- Patient had a history of hypertension since 3rd month of gestation. Patient was on T Labet 100mg TDS.
- History of DM since 1 month of gestation Patient was on INJ ACTRAPID 8-8-6
- PERABDOMEN EXAMINATION:uterus-full term,multiple fetal parts palpable on both the flanks,12contractions,20-25seconds every 10 mins,head-just fixed ,FHR present on maternal right-146/min.Per Speculum examination: frank leak present..Per vaginal examination: Cervix os 2-2.5cm dilated,Cervix 20-30% effaced,Station -2 , Membranesabsent, Pelvis adequate
- Patient was admitted at 34 weeks of gestation and **INTENSIVE FETOMATERNAL SURVEILLANCE was done.:** REGULAR FETALFHR MONITORING NST. DFMC. BIWEEKLY DOPPLER. WEEKLY COAGULATION PROFILE.

- PATIENT DELIVERED BY FULL TERM NORMAL VAGINAL DELIVERY WITH EPISIOTOMY AT 37WK BD/ 37WK BU OF GESTATION. Patient delivered male child 3.1kg.baby mother side. Patient was vitally stable post delivery

TWIN A- HEALTHY LIVE FETUS
TWIN B - IUD

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CONCLUSION:

In the 2 cases as described , cesarean section was performed only in that patients with obstetric indications(Doppler changes, malpresentation, and IUGR) and the other patient was managed conservatively with intensive fetometernal surveillance

According to Babah et al. had successful induction of labor and vaginal delivery at 37 weeks after the continuation of conservative management for 5 weeks(4).

Vaginal delivery is not contraindicated in cases of SIUFD. However, an obstructed labor can occur if the dead twin is presenting as transverse. In monochorionic twins complicated by SIUFD, cesarean section may avoid the risk of acute TTTS due to vascular anastomoses(5)

Deveer et al. reported that the mean gestational age at diagnosis of a SIUFD was negatively correlated with gestational age at delivery. Our findings were consistent with their study(6).

In our study, there was significant association between SIUFD and hypertensive disorders of pregnancy and diabetes mellitus and the patient was managed conservatively till term with intensive feto maternal surveillance.

Studies have suggested that the fetal outcome is mainly gestation-dependent and the goal should be to prolong pregnancy. There is a higher risk of preterm birth in twin pregnancies with SIUFD, so steroids should be administered <34 weeks to induce lung maturity. Most studies favor conservative management until 37 weeks' gestation, if fetal movements, cardiotocography, and USG show no abnormalities [2]

An early decision to perform a cesarean section owing to concerns of maternal coagulopathy should be avoided because it may cause prematurity-related problems for the fetus and increase morbidity for the mother.

The sequelae of a single fetal death in a twin pregnancy depend on the gestation and placentation. Death in the late second or third trimester is associated with significant morbidity and mortality in the surviving twin. Therefore, all twin pregnancies with one dead fetus should be managed in tertiary referral centers with sufficient neonatal support. [1]

The postpartum course was uneventful in both the cases, and all live-born babies were normal and not having any deformity(2).

According to HHN Woo et al., death in the late second or third trimester is connected with significant mortality and morbidity on the surviving twin.
The primary concern for single fetal demise in a twin pregnancy is its effect on the surviving fetus and mother.
Regular antenatal care and routine ultrasonography in pregnancy are needed to make a diagnosis. Close monitoring of the wellbeing of the surviving twin andcoagulation profile of the mother are crucial to manage possible complications. Proper counselling and management will result in a successful outcome(3).

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