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RESEARCH ARTICLE

CONSUMPTION COAGULOPATHY FOLLOWING SINGLE FETAL DEMISE IN SECOND TRIMESTER DCDA TWIN PREGNANCY-A RARE CASE REPORT

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Abstract

Multifetal pregnancies are estimated to represent 3.2% of all pregnancies (80% are dichorionic and 20% monochorionic) and are associated with a higher risk of perinatal morbidity and mortality relative to single pregnancies. Single fetal loss of a twin pregnancy during the first trimester is not an uncommonevent and seems not to impair the further development of the surviving one. In gestational losses where the fetus is retained intrauterine for at least 10 weeks, there is the possibility of finding fetus papyraceus at the time of delivery. This is a rare event that results from incomplete reabsorption of the dead fetus, which is then compressed between the membranes and the uterine wall. In contrast, the death of a twin in the late second or third trimester of pregnancy isa rare obstetric complication associated with increased maternal and fetal morbidity andmortality.Herein, the authors report a successful management of maternal DIC following single fetal death in the second trimester of a dichorionicdiamniotictwin pregnancy.

Introduction:-

Single foetal death in twin pregnancies is not rare; the reported incidence ranges from 0.5% to 6.8%.The risk of mortality and morbidity in the survivingtwin is considerable.[1]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. Apart from important psychological stress to both parents and attending obstetrician, this condition is highly associated with preterm labor, preeclampsia, intrauterine growth restriction (IUGR), neurological complications or even the death of the surviving twin, as well as maternal disseminated intravascular coagulation (DIC). In order to avoid complications and achieve the optimal maternal and neonatal outcomes, conservative prenatal follow-up should focus on careful monitoring and serial assessment of both fetal and maternal wellbeing

Case Report:

A case of 26 year old primigravida at 25 weeks of gestation with DCDA twins was referred to our hospital from a private health care facility inview of early onset hypertension and doppler abnormality in one of the twins. She was a known case of polycystic ovarian syndrome with 4 years of primary infertility and conceived following first cycle of ovulation induction with tablet Letrazole. She had a first record of high blood pressure of 140/90 mmHg a day before she was referred to us. She was started on tablet Labetolol 100mg twice daily. Obstetric ultrasound examination revealed severe growth discordancy of 30% , resistance to flow in bilateral uterine arteries andreversed end diastolic flow in Umbilical artery of twin B. There were multiple hypoechoic lesions in placenta of twin B.

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Counselling was offered regarding the potential unfavorable outcome for the pregnancy in general and especially for the fetus B which already showed signs of distress. Review doppler ultrasound examination after admission diagnosed death of twin B. She was managed conservatively with monitoring of CBP was coagulation profile every third day. There was a fall in blood pressure to normal range on day 6 following fetal demise and we withheld anti-hypertensive medication.Serial doppler ultrasound done every 3rd day revealed occasional absent end diastolic flow in the Umbilical artery of surviving twin on day 7 following the death of co-twin.A retroplacental clot of 1.6*1.7cm was also made out in twin B. Though the coagulation profile was normal, there was a fall in platelet count from a base line of 3.2 lakh/cmm to 2.4 lakh/cmm. The very next day, there was a sudden shoot up blood pressure with symptoms of imminent eclampsia necessitating induction of labor with intracervical foley bulb combined with vaginal misoprostol tablet. Induction delivery interval was 4 hours. She delivered fresh stillborn fetus A weighing one Kg and a macerated fetus B weighing 500gm. About an hour after delivery, she started bleeding continuously inspite of well retracted uterus and there was bleeding from gums along with bruising over extremities. Coagulation profile was deranged with Prothrombin time>120 seconds, INR>9.7 and APTT>98 seconds. Platelet count fell down to 53,000cmm/. She required 8 units of fresh frozen plasma, 3 units of packed red cells and inotropic support. Coagulation profile recovered to normal range on 3rd postnatal day and she was discharged on 7th postnatal day, off anti-hypertensives.

Discussion:-

The incidence of single fetal death in twin pregnancies is reported to be as high as 2.5%to 6.0%, compared to 0.3% to 0.6% in singleton pregnancies.[2,3]The incidence of single fetal demise is higher in monochorionic than in dichorionicpregnancies. Monochorionicity is reported in 50%–70% of twin pregnancies with intrauterinesingle fetal death.[4,5]The causes of single fetal demise in a twin pregnancy are represented by twin–twintransfusion, placental insufficiency, placental abruption, IUGR related to pre-eclampsia,discordant growth, velamentous insertion of cord, cord stricture or true knot, cord aroundthe neck, congenital abnormalities and blunt abdominal injury.[6,7,8]

The prognosis of pregnancy after the death of one of the twins will depend primarily on the gestational age at the time of fetal death and chorionicity, regardless of amnionicity.

In a study published byArinkan et al.there was a 13 times greater risk for premature delivery for the survivingfetus, as well as a seven times greater risk for abruptio placentae in the monochorionicgroup compared with dichorionic group with single fetal demise.[9]After Livnat et al. the risk of cotwindeath in monochorionic pregnancy is 12%, as compared with a 4% risk in dichorionicpregnancies.[10]This could be explained by placental vascular anastomoses, which can beseen in up to 98% of monochorionic pregnancies.[7]Persistent absent or reversed end-diastolic flow in umbilical artery Doppler has been associated with severe fetal deterioration, while intermittent absent or reversed end-diastolic flow has been reported to be associated with unexpected fetal demise. Normal umbilical artery Doppler pulsatility index carries the best prognosis.[11,12,13]

For maternal monitoring, coagulation blood tests are recommended.Although potentially fatal for both mother and fetus, maternal coagulopathy appearsto be uncommon.[14] According to different studies published by Romero et al.Landy et al., Pritchard and Ratnoff, the incidence of maternal DIC following singlefetal demise will not exceed 25% of cases.[15,6,16] Moreover, coagulopathy has been reported to occur in about 3–5 weeks following fetaldemise.[17]The DIC may progress in a slow and chronic mannerwithout being fulminant. The fibrinogen level returnsto normal in all cases within 48 hours of delivery.The underlying mechanism of DIC is not known;there may be a breach between the maternal and foetalcirculations, which allows the passage of tissuethromboplastins from the dead foetus and its placentainto the maternal circulation. The transferred thromboplastinsactivate the extrinsic coagulation pathway and thereby consume platelets and coagulation factors.[18]Pregnancy-induced hypertension and pre-eclampsiahave also been found to be associated with the intrauterinedeath of one twin.[19,20]These conditions, however,may have been the causes of intrauterine deathrather than complications. Our case is rare because mother had a complication of DIC following single fetal demise in a DCDA twin pregnancy.

Conclusion:-

The diagnosis of a single fetal death in multifetal pregnancies is relevant due to its potential effect on the survival of the other fetus and on possible maternal complications. The sequelae depend on the gestation and placentation. In order to avoid complications and achieve the optimal maternal and neonatal outcomes, conservative prenatalfollow-

up should focus on careful monitoring and serial assessment of both fetal and maternal wellbeing. Adequate counselling, psychological support, and long-term followupare mandatory .

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