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A RARE CASE OF FETUS PAPYRACEUS IN TWIN PREGNANCY: A CASE REPORT

Dr Rita D — Professor and HOD, Department of Obstetrics & Gynaecology, Navodaya Medical College Hospital & Research Centre, Raichur, Karnataka

Dr Poornima G — Junior Resident, Department of Obstetrics and Gynaecology, Navodaya Medical College Hospital & Research Centre, Raichur, Karnataka

ABSTRACT Fetus papyraceus refers to the intrauterine fetal death of one twin occurring early in pregnancy, with retention of the dead fetus for at least 10 weeks. Mechanical compression flattens the fetus so that it resembles parchment paper; it becomes dry and papery because amniotic fluid from the dead fetal tissues is absorbed. The incidence is approximately 1 in 17,000–20,000 pregnancies and ranges between 1:184 and 1:200 twin pregnancies. An unbooked case of 26 years old G4P2L2A1 with 6 months of amenorrhea with hypothyroidism came to OPD. Her USG report showed DCDA twin pregnancy; one live and active fetus of 28 weeks 1 day and other with absent cardiac activity with average gestation of 17 weeks 1 day with severe oligohydramnios. She was managed conservatively with monitoring of fibrinogen level and ultrasonography for every two weeks. It is typically an incidental finding, with complications being more frequent in monochorionic than in dichorionic twin pregnancies.

KEYWORDS : Fetus Papyraceus, Twin Pregnancy, Intrauterine Fetal Death

INTRODUCTION

Fetus papyraceus is used when intrauterine fetal death of one twin occurs early in pregnancy, with retention of dead fetus for a minimum of 10 weeks, resulting in mechanical compression of the dead fetus such that it simulates parchment paper, it is dry and papery because the amniotic fluid content of dead fetal tissues gets absorbed.[1]

Incidence is 1 in 17,000 to 20,000 pregnancies and ranges between 1:184 and 1:200 twin pregnancies.[2]

Fetus papyraceus is an incidental finding, the complications related to fetus papyraceus is more in monochorionic twin as compare to dichorionic twin pregnancy.[3]

The death of one twin in first trimester with vanishing twin syndrome is relatively common (up to 29%) and the pregnancy usually continues with little adverse effect on the mother and other twin. But, the death of one twin in second or third trimester is more serious with an increased risk for surviving twin and possibility of maternal disseminated intravascular coagulation (DIC).[4]

Ultrasound is the gold standard for diagnosis; MRI may be used to evaluate ischemic brain injury in the surviving fetus. Color Doppler is valuable in assessing vascular anastomoses in monochorionic pregnancies. [5]

Case Report

A case referred from periphery, 26 years old G4P2L2A1 with 6 months of amenorrhea with hypothyroidism. General physical examination and systemic examination were normal. Per Abdomen examination: height of the uterus corresponding to 26-28weeks period of gestation, relaxed, FHS of only one fetus was heard on auscultation, 146 bpm. ANC profile done at first visit was said to be normal.

USG report on first visit showed DCDA twin pregnancy; one live and active fetus of 28 weeks 1 day with adequate liquor and other with absent cardiac activity with average gestation of 17 weeks 1 day with severe oligohydramnios.

Patient was routinely called for antenatal checkups and managed conservatively with coagulation profile, serum fibrinogen, D-Dimer, ultrasonography every two weeks till term gestation.

Progesterone supplementation was given to prevent preterm labour. Prophylactic antibiotic coverage was done till term gestation.

Prophylactic betamethasone coverage was done at 32 weeks.

Investigations

CBC – Normal, Blood grouping & typing- A positive, Urine routine – normal, Random blood sugars- 90 mg/dL, Coagulation profile – normal, D DIMER- 1564 ng/MI, Serum fibrinogen – 267.94 mg/dL

Ultrasonography - A live intra-uterine pregnancy of 36 weeks + 2 days of gestational age (twin I) and early fetal demise of twin II with two separate placenta and intertwine membrane (dichorionic and diamniotic twin pregnancy)

TWIN I - FHR- 136 bpm, EFW- 2901g, AFI- 12-13 cms, Placenta – Anterior Grade III, BPP- 8/8, Presentation – Cephalic

TWIN II – Average of 17 weeks gestational age, FHR – Absent, AFI – severe oligohydramnios, Placenta – Anterior Grade I

Management

All antenatal visits, investigations and examinations were uneventful till term.

In 3rd trimester, at 37 weeks gestation, she presented with complain of lower abdominal pain; at the time of admission, general physical examination was normal, obstetric examination showed fundal height corresponding to term gestation, relaxed, cephalic presentation with fetal heart rate of 136/min of twin I and absent cardiac activity of twin II.

Emergency caesarean section was performed on 4/11/23.

Intra Operative Findings: lower uterine segment was well formed

Twin I – excess liquor, extracted a live term male baby of 2.608kg, vertex presentation, vacuum extracted. Baby cried immediately after birth.

Twin II- Intact fetal membranes were noted. After separating membranes, nil liquor, fetal parts were identified. Fetus was found dry, papery, flattened, compression that it simulates parchment paper, enveloped in fetal membranes, long threaded like cord was noted – suggestive of Papyraceus fetus

Placental Examination: On examination of the placenta, diamniotic dichorionic placenta noted, one healthy placenta of weight 500g with 2 arteries and 1 vein with intact cotyledons and another unhealthy white papery placenta of weight 230g with single threaded like cord was noted.

DISCUSSION

Fetus papyraceus can occur in both monochorionic and dichorionic twin pregnancies, but more common in monochorionic twin pregnancy.

USG scan at 2nd trimester showed one live and active fetus of 28 weeks 1 day with adequate liquor and other with absent cardiac activity with average gestation of 17 weeks 1 day with severe oligohydramnios.

Patient was monitored with non-stress test (NST), biophysical profile (BPP), serial ultrasonography, coagulation profile every 2 weeks till the time of delivery to avoid maternal complication such as maternal infection, consumptive coagulopathy, sepsis due to retention of dead fetus, preterm labour, chorioamnionitis, retained placenta, placenta accreta, unexplained postpartum hemorrhage (PPH).[6]

Prognosis of surviving fetus in twin pregnancy depends on factors like number of fetuses, gestational age at time of death, cause of death, chorionicity, length of time between demise and delivery if surviving fetus. Prognosis is relatively better in dichorionic versus monochorionic pregnancies.

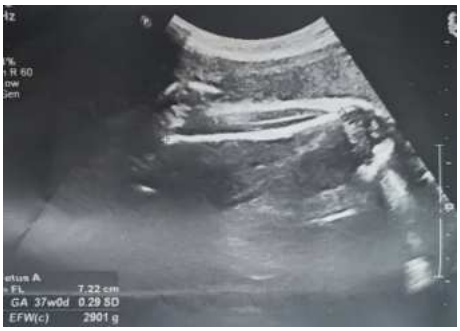

Fig 1: Scan Showing Fetus-2 Compressed to Uterine Wall

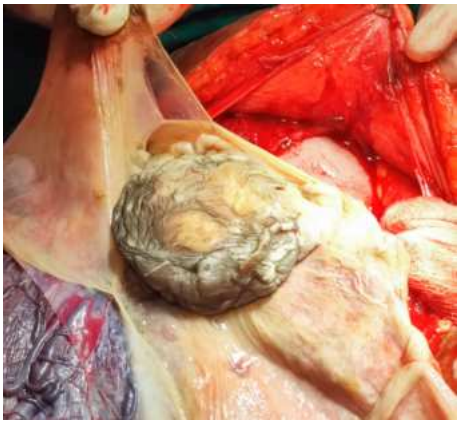

FIG 2: Intra-operative Finding of Fetus Papyraceus with Fetal Membranes

FIG 3: DCDA Placenta with Fetus Papyraceus and a Live Fetus.

FIG 4: Fetus Papyraceus

CONCLUSIONS

Fetus papyraceous is a rare condition that concerns with effect on surviving fetus and mother, challenging the obstetrician whether to continue or terminate the pregnancy.

Early diagnosis of twin pregnancy and type of twin pregnancy to be done with ultrasound examination. Regular ANC visits, to be carried out to focus on careful monitoring and serial assessment of both fetal and maternal well-being in order to avoid complications.

Complications that can occur in live fetus like prematurity, intrauterine growth restriction, low birth weight, congenital disorders, and even death and complications due to dead fetus like sepsis, DIC, chorioamnionitis can be avoided by close maternal and fetal surveillance.

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