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Case Report

Fetus papyraceous, a rare complication of twin pregnancy: case report

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ABSTRACT

Fetus papyraceous or compressus is the mummified fetus associated with multiple gestation, where one fetus dies in early second trimester, flattened, mummified and compressed between the membranes of the living fetus and the uterine wall. It is more common in monozygotic twins but may occur in dizygotic variety. However, the maternal and fetal complications in affected cases can be severe. We present a case that was diagnosed as dichorionic diamniotic twin gestation in early pregnancy which subsequently resulted in the fetal demise of one twin in second trimester leading to fetus papyraceus, but careful maternal and fetal monitoring leads to successful healthy outcome of mother and surviving fetus.

Keywords: Twin pregnancy, Fetus papyraceous, Intrauterine death, Diamniotic dichorionic

INTRODUCTION

Multiple gestations have become one of the common high-risk conditions encountered by the obstetricians. Twins represent approximately 3% of all live births. Term 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 mechanical compression of the dead fetus such that it simulates parchment paper.¹ Being a rare complication, the incidence of fetus papyraceous has been reported at 1 in 17,000 to 20,000 pregnancies, and ranges between 1:184 and 1:200 twin pregnancies.¹⁻³ Most of the time fetus papyraceus is an incidental finding, the complications related to fetus papyraceus depend on chorionicity, that is more in monochorionic twin as compare to dichorionic twin pregnancy.

CASE REPORT

A 30-year-old female, gravida 3 para 1 living 1 Spontaneous abortion 1, at 36 weeks 4 days period of

gestation visited to OPD first time for safe confinement, with history of infertility treatment, and conceived by ovulation-induction followed by intrauterine insemination. Her first trimester USG showed diamniotic dichorionic twin gestation with normal cardiac activity of both the twins. Her level II scan at 18 weeks of gestational age showed diamniotic dichorionic twin with absent cardiac activity of twin A with parameter of average gestation age 16 weeks 5 days. Twin B- cardiac activity is present with average gestational age 17 weeks 3 days, with normal level II scan. Patient and her husband counseled about her condition and risks to mother and fetus. She was managed conservatively with monitoring of coagulation profile every two weeks and ultrasonography every three weeks. Admitted at 40 weeks period of gestation for induction of labor. Patient's general and obstetrical examination was within normal limits, general condition-fair, pulse- 88/min, blood pressure- 110/70 mm of Hg, no pallor, no pedal edema, systemic examination- WNL, on per abdomen examination- uterus term size, cephalic, relaxed, fetal heart rate-144 bpm. Induction of labor was done with

PGE2 gel, but patient delivered by emergency LSCS because of fetal distress. A healthy male baby weighing 3.1 kg delivered, the other fetus was found enveloped in fetal membranes, flattened along the placenta, the crown rump length of fetus papyraceus was 11 cm and weight 150 grams (Figure 1). The normal baby is under follow-up for next one year to assess any developmental delay.



Figure 1: Fetus papyraceus between fetal membranes and placenta.

DISCUSSION

Fetus papyraceus is an uncommon condition seen 1 in 17,000 to 20,000 pregnancies.¹ It occurs in multiple gestation pregnancies, when the one fetus died early in 2nd trimester and the other fetus continue to grow. fetus papyraceus is tiny, mummified, and parchment-like because of the absorption of amniotic fluid, fluid content of the dead fetus and the placenta, the dead fetus is flattened and compressed between the membranes.⁴ This condition can adversely effects both the mother and the surviving twin. Diagnosis of fetus papyraceus is important to predict for future obstetric complications and to predict the risk of mortality and morbidity for the surviving fetus.^{5,6}

Fetal demise of one twin in the first trimester of pregnancy is a relatively commoner than fetal demise in the second trimester and carries risks for the mother as well as for the surviving twin. The complications of fetus papyraceous on the surviving twin include fetal growth restriction, pre-term labor, cord complications, congenital disorders and prematurity, although these are rare complications.⁷ Multicystic encephalomalacia, a rare congenital disorder, results from severe fetal hypotension and hypoxia, occurs in 20% of surviving twin and contributes to the increased morbidity. The risk of serious cerebral impairment in the surviving twin following fetal death of one twin is about 20%.⁸ Prevalence of cerebral palsy in surviving twin after demise of one twin is found more than that of healthy twin pregnancy. The twin embolization syndrome is a serious complication that occurs in 25% of surviving twins after fetal demise of one

twin. Twin embolization syndrome is result of events including- embolization of placental and fetal thromboplastins, or the direct embolization of necrosed fragments of the placenta of the dead fetus, or even infectious endarteritis and DIC. During labor Fetus papyraceous can leads to dystocia or even other rare obstetrical complications like obstructed labor and delay or obstruction the placental delivery when the fetus papyraceous lies transversely in the pelvis below the surviving twin.

Timely diagnosis of fetus papyraceus is extremely important to prevent further complications and have successful surviving fetal outcome. After correct and timely diagnosis conservative management with close maternal and fetal monitoring is advised, counselling and assurance of the parents is also very important.

CONCLUSION

Though fetus papyraceus is a rare finding, and etiology is not completely explained but delayed recognition can lead to severe complications. So early diagnosis is important to prevent the possible complications. Regular antenatal visits, serial ultrasound examinations and serial blood investigations is must with careful monitoring for better maternal and neonatal outcome.

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