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Case Report

A rare case of twin fetal papyraceous in triplet pregnancy: clinical challenges and insights

Mamta Agarwal*, Saurabh Jindal

Jindal Gastro Liver and Maternity Centre Moradabad, UP, India

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***Correspondence:**
Dr. Mamta Agarwal,
E-mail: drmamtaagarwalmbd@gmail.com

ABSTRACT

The occurrence of twin papyraceous foetuses in triplet pregnancy is rare. A papyraceous foetus is found almost exclusively in multiple gestation. Twin fetal papyraceous occurs when one or more fetuses die in utero with retention of the fetus for a minimum of 10 weeks resulting in mechanical compression of the small fetus and loss of fluid such that it resembles parchment paper. This condition can have serious implications for the remaining fetuses and the overall pregnancy. Understanding the causes, potential complications, and management strategies for triplet pregnancies complicated by twin fetal papyraceous is crucial for ensuring the best possible outcomes for both mother and babies. We report here a case of a 24 year female with triplet pregnancy with two foetus papyracei who delivered a healthy baby at 34 weeks.

Keywords: Fetal papyraceous, Triplet, Multiple gestation

INTRODUCTION

A single fetal death in multiple pregnancy is not uncommon.[1] The rate of intrauterine accident is 1 in 184 twin pregnancies (0.54%) and about 1 in 8000 triplet pregnancies.[2] Fetal papyraceous occurs in about 1 in 12,500 twin pregnancies and 1 in 32,800 triplet pregnancies.[2] Two papyraceous fetuses in a triplet pregnancy is exceedingly rare.[2] It may occur in both varieties of twins, but more common in monozygotic twins.[3] The retention of a mummified parchment-like remains of a dead fetus (es) in multiple pregnancy in the second trimester of pregnancy in association with a viable twin is known as fetus papyraceous.[4,5] The incidence quoted is likely to be higher in Nigeria, a country with the highest twinning rate in the world.[6]

CASE REPORT

A 24-year-old female second gravida, para one with one living issue reported to OPD at 24 weeks pregnancy. She was not sure of her LMP. USG report showed triplet pregnancy with one live and two nonviable intrauterine fetuses of gestational age 24 weeks, 14.4 weeks, 15.5 weeks respectively. No blood tests were done until then. Her 1st pregnancy was uneventful with normal vaginal delivery 14 month back by untrained professional at home. Patient did not come for regular follow up. She again came in emergency after 2.5 month with complaints of decreased fetal movement for past 3-4 days. USG showed triplet one live and two nonviable fetuses of gestational age 34 week 3 days, 14 weeks 1 day, 15 weeks 1 day with oligohydromnios with AFI 6.3. At the time of admission general examination was unremarkable. The pulse rate was 86 beats per minute and her blood pressure was 120/80 mmHg. The fundal height was corresponding to period of gestation. Routine antenatal investigations like haemoglobin, total leucocyte count, differential count, platelet count, urine routine and microscopy, thyroid profile were within normal limits. Her HIV, HbsAg and VDRL status were negative. CTG was non-reassuring so decision of emergency LSCS was taken. An alive boy baby

of 1.9 kg delivered by vertex followed spontaneously expulsion of placenta and membranes. Examination of the placenta showed two macerated foetuses in separate amniotic sacs (Figure 1 and 2). She was discharged on the 4th postnatal day with her baby. Both had no complaints at the 6th week post-natal visit.

Figure 1: Macerated foetuses.

Figure 2: Macerated foetuses in separate amniotic sacs.

DISCUSSION

Twin fetal papyraceous is a condition characterized by the in-utero death of one or more fetuses, leading to the compression and mummification of the deceased fetus to a paper-like state. This phenomenon is typically observed in multiple pregnancies, such as twins, triplets, or higher-order multiples. Management of papyraceous twin with a live twin is challenging to the obstetricians. Various factors which may influence management of such a case are chronicity; gestational age at diagnosis and other complications specific to the pregnancy.[7]

The development of twin fetal papyraceous is most often the result of selective intrauterine fetal demise, typically occurring in the second trimester. Factors contributing to this condition include placental insufficiency, chromosomal abnormalities, or congenital malformations. In the context of a triplet pregnancy, the presence of a shared placenta (monochorionic) increases the risk, as vascular anastomoses between the fetuses can lead to imbalanced blood flow and subsequent demise of one or more fetuses. Maternal complications include preterm labor, consumptive coagulopathy, labor dystocia, and sepsis as a result of the retention of a dead fetus.[8] The diagnosis rests on the fact that multiple pregnancy is not missed during ultrasound examination. Ultrasound scan plays a pivotal role in the diagnosis of twin pregnancy and its complications.[9]

If the foetus is absorbed completely in the first trimester, there are usually no further complications to the pregnancy. However, if the event occurs after the first trimester, serious complications can occur which may include preterm labour, septicaemia and severe bleeding. Rarely at term, a low-lying foetus papyraceus may block the cervix necessitating a caesarean to deliver the living twin. The live twin of a vanishing twin pregnancy is also prone to cerebral palsy, renal failure, intrauterine or neonatal deaths. The possible mechanism may be transfer of thromboplastic proteins from the first twin to die to the other twin circulation, resulting in DIC. The other explanation may be that massive blood loss through vascular anastomosis may have taken place from the second twin to die into the first to die who had a more relaxed circulation. Feto-fetal transfusion imbalance may lead to foetal or infant death or cerebral palsy and/or congenital anomaly in surviving twins.[10-12] The survivor in this triplet pregnancy had no obvious complications. If possible, delivery should be scheduled at a tertiary care centre. Good management of labour and thoroughly inspected placenta and membranes will permit the diagnosis of abnormalities and of foetus papyraceous.

CONCLUSION

Twin fetal papyraceous in a triplet pregnancy is a rare and complex condition. Successful management involves a multidisciplinary approach, including regular ultrasound evaluations, maternal-fetal medicine consultations, and individualized care plans to address the specific needs of the mother and the surviving fetuses. It is crucial to monitor for potential complications such as preterm labor, infection, and growth restriction in the surviving fetuses.

Ultimately, the goal is to optimize outcomes for both the mother and the remaining fetuses through careful surveillance and appropriate medical interventions.

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