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Fetus papyraceous: A case report of Kapkatet Sub-County Hospital, Kenya

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Abstract

Fetus papyraceous is a rare obstetric complication in multiple gestations, the incidence of which in case of twins is 1 in 12,500. It may be associated with maternal complication of disseminated intravascular coagulation and brain damage in the surviving co-twin. Fetus papyraceous can occur both in uniovular and binovular twin pregnancies. The study reports a case of binovular twin pregnancy with one twin fetus papyraceous and the other twin born preterm.

Keywords: *Fetus papyraceous, uniovular, biovular*

Introduction

Fetus papyraceous (FP) also known as vanishing twin syndrome (Landy & Keith, 1998; Malathi, Brindhini, & Vanaja, 2017) is defined as early gestational loss of one of a pair of twins (Almog et al., 2010). It occurs when a fetus dies in utero usually in second trimester and is not expelled out, resulting in its atrophy and mummification (Mynso et al., 2015; Rahman et al., 2013). The incidence of fetus papyraceous in twin pregnancy is 1 in 12,500 live births (Manjula & Sujani, 2011) or 1 in 17,000-20,000 pregnancies or 2.3% of all twin pregnancies (Mynso et al., 2015). The case presented is a suspect that death might have occurred late in the second trimester.

Case report

A 34 year old para 3+0 gravida 4 came to labour ward of Kapkatet Sub-County Hospital, Kenya 16th June 2021, at 10:30 am, with history of lower abdominal pains associated with rupture of membranes four hours prior to admission. Upon examination, fundal height of 36 weeks with a positive fetal heart rate at 134 beats per minute, the cervix was 9cm dilated and delivered within

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30 minutes to a preterm neonate at 31 weeks gestation with Apgar score of 8 and 10 at one and ten minutes respectively and a birth weight of 1.6 kg. The neonate was admitted to newborn unit for care. After delivery the uterus felt as though there was another fetus but body parts would not be identified. Soon after, the placenta was expelled and fetus papyraceous was discovered within the placenta. The FP weighed about 500 grams and the placenta weighed about 100 grams. The FP had obvious musculoskeletal abnormalities which the study suspects may have resulted from prolonged maceration and compression in utero.

Her previous pregnancies were all preterm deliveries where the first delivery was at 32 weeks gestation born through spontaneous vaginal delivery (SVD) delivered in a hospital with a birth weight of 2.0 kg. The second pregnancy was born at 32 weeks gestation through SVD in the hospital with a birth weight of 1.7 kg but died after 10 days of care in the newborn unit. Third pregnancy was also born preterm born in the hospital through SVD with a gestation of 28 weeks and a birth weight of 1.3 kg but survived after two months of care at the newborn unit.

There was no history of multiple pregnancies in the family or history of congenital abnormality. She had attended antenatal clinic once at 24 weeks gestation and she was not informed of twin pregnancy. During the visit, tetanus toxoid was administered and given ferrous sulphate and folic acid which the mother reported that she did not take them regularly. She was also screened for HIV which was negative; VDRL was negative, blood group of O with Rhesus factor positive and urinalysis which was normal. However, blood for haemoglobin estimation was not taken. An obstetric ultrasound was also not done.

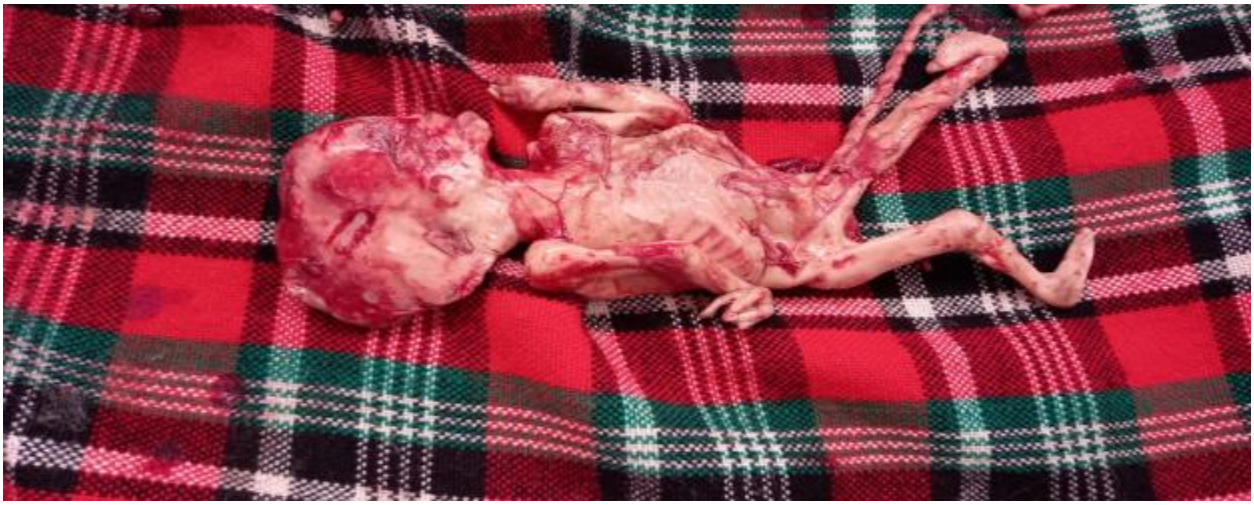

Fig 1: A picture of an atrophied and mummified foetus

Discussion

Fetus papyraceous is a rare obstetric event where in multiple pregnancies one fetus dies becoming papyraceous while the other twin survives (Rahman *et al.*, 2013). It may occur due to twin-twin transfusion syndrome, placental insufficiency and congenital abnormalities (Rahman et al., 2013) cord complications (velamentus cord insertion, true knot, cord stricture), intrauterine growth restriction (Talib, 2005). In most cases the fluid of the dead tissue is gradually absorbed,

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the amniotic fluid disappears and the fetus is compressed and becomes incorporated into membranes (Manjula & Sujani, 2011).

Predisposing factors to FP is vaginal bleeding in early gestation, mother who conceive through assisted reproductive conception have 12-30% chance(Almog et al., 2010) , maternal age where the risk is higher in older women (Evron, Sheiner, Friger, Sergienko, & Harlev, 2015). Maternal complications include; disseminated intravascular coagulation (Landy & Keith, 1998; Talib, 2005), preterm labour, infections from a retained fetus, severe puerperal hemorrhage, obstructed labour by a low lying fetus papyraceous (Swati Dubey, 2013), cervical dystocia, difficult placental delivery (Kapil Slong Mynso, 2015) and emotional stress from loss of the twin (Nursing, Brief, & Syndrome, n.d.).

Effects on the surviving twin include; brain damage (Landy & Keith, 1998), increased risk of morbidity and mortality, prematurity (Talib, 2005), spontaneous miscarriage of the other twin (Kovachev, Ivanova, & Kisyov, 2015), intrauterine growth restriction, very low birth weight, perinatal mortality, congenital abnormalities, malformations of cortical development in monochorionic twin, and preterm premature rupture of membranes (Evron *et al.,* 2015), risk for cerebral palsy and twin embolization syndrome (Rahman *et al.,* 2013).

Management

Diagnosis can be done during antenatal period by ultrasound (Manjula & Sujani, 2011). Once diagnosed the mother should be counseled and offered support during pregnancy. Care should be given in a hospital with newborn unit and in case of preterm labour steroid prophylaxis should be offered (Talib, 2005). After delivery post-mortem examination of the stillborn and histological examination of the placenta should be done. The neonate should be followed by the paediatrician for some time.

If a diagnosis of FP is made antenatally, serial evaluation of the surviving fetus by ultrasonography should be done. In addition, the biophysical profile and maternal coagulation factors should also be serially performed (Rahman *et al.,* 2013). However, the condition is difficult to diagnose if obstetric ultrasound are not done during the antenatal visits, thus many a times diagnosis only occurs after delivery(Mynso et al., 2015).

Conclusion

Fetus papyraceous is a rare condition which can be diagnosed during antenatal period if ultrasound is done. All placentas and membranes should be carefully examined to rule out FP as many are diagnosed after delivery. We are reporting a case of FP with no maternal complication but with prematurity of the surviving twin. However, we also suspect that the mother could be having incompetence of the cervix since all previous deliveries are born preterm with gestation between 28 and 34.

Source of Funding

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Conflict of Interest

None.

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