Case Report

Fetal Papyraceus discovered at second stage of labour in an unbooked patient: a case report

Abstract:

Background: Fetus Papyraceus is a rare condition with the intrauterine death and subsequent retention of one or more fetuses of a multiple gestation. Antepartum diagnosis of fetus papyraceus is infrequent and usually it is a chance finding during investigation of some other pregnancy problem on ultrasonography. I report a case of fetus papyraceus in an unbooked patient diagnosed at second stage of labour.

Case presentation: A 26-year-old, unbooked primigravida, presented to the Labour Ward at a gestational age of 35 weeks with labour pains of 6 hours duration. On admission, she had features of mild pre-eclampsia, but had good contractions and was in established labour. She had an obese anterior abdominal wall with marked oedema, which made discerning the fetal presentation and auscultating the fetal heart sounds difficult. She was however delivered of a live baby weighing 3300g with good Apgar score. This was followed by the delivery of a fetus papyraceus weighing 200g, with crown rump length of 85mm. subsequent delivery and examination of the placenta revealed a diamniotic-monochorionic twin gestation. Both the mother and live baby were discharged home in good condition.

Conclusion: The antenatal diagnosis of fetus papyraceus is usually a chance finding on obstetric scan for other problems or routinely. The primary concern for fetus papyraceus is its effect on the surviving fetus. Regular antenatal care and routine ultrasonography in pregnancy is mandatory to diagnose and manage possible complications. Where this is missed, routine placental examination to search for fetus papyraceus and establish chorionicity is mandatory.

Keywords: Twin pregnancy, Intrauterine death, Fetus papyraceus,

Comment [1-AC1]: Use the 3.th person

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Introduction:

Multiple pregnancies are one of the common high-risk conditions faced by Obstetricians. Twins represent approximately 3% of all live births [1] and Triplets and higher order births now occur with a frequency approaching 1 in every 500 deliveries [2]. Multiple births result in 17% of all preterm births less than 37 weeks and 26% of all very low birth-weight (<1500g) babies [2].

Fetus Papyraceus is a rare condition with the intrauterine death (IUFD) and subsequent retention of one or more fetuses of a multiple gestation. The fetus must have been retained for a minimum of 10 weeks resulting in mechanical compression of the dead fetus such that it resembles parchment paper [3]. Fetus papyraceus is a rare complication with a reported incidence of 1:12,000 pregnancies [4] and between 1:184 and 1:200 twin pregnancies [5].

Antepartum diagnosis of fetus papyraceus is infrequent and usually it is a chance finding during investigation of some other pregnancy problem on ultrasonography [6]. Clinically it can be suspected when rapid enlargement between 12 to 24 weeks gestation is followed by a normal or slowed growth period; sudden appearance or subsidence of toxaemia of pregnancy; unexplained bouts of vaginal bleeding; and amniotic fluid leakage which suddenly ceases [7]. Before the advent and widespread use of ultrasonography, many cases were diagnosed after birth during examination of the placenta; or if suspected antepartum, by use of x-ray [8].

The complications related to fetus papyraceus depend on whether it is a monochorionic or dichorionic twin pregnancy. Monochorionic twin pregnancies are associated with several complications when compared with dichorionic pregnancies [5, 6]. I present a case of a 26-year-old woman with monochorionic twin pregnancy consisting of one normal fetus and one fetus papyraceus diagnosed at second stage of labour.

Case presentation:

A 26-year-old, unbooked primigravida, presented to the Labour Ward at a gestational age of 35 weeks with labour pains for past 6 hours. She was a housewife and had secondary education. She had no formal antenatal care anywhere, but received haematinics and antimalarial prophylaxis. She had not done any obstetric ultrasound scan prior to presentation.

Upon admission to the Labour Ward, she was obese, with marked pedal & anterior abdominal wall oedema, had BP of 150/90mmhg and proteinuria (++). Abdominal examination revealed a gravid abdomen with fundal height corresponding to 36 weeks; there were three strong contractions in 10 minutes, each lasting 35 seconds; the fetal presentation was not discernable and the fetal heart rate was not heard on auscultation with fetoscope. On digital vaginal examination, the cervix was 4cm dilated, fully effaced; the presenting part was cephalic at station -2; fetal membranes were intact and artificial rupture was done.

She had a spontaneous vaginal delivery, about 8 hours after admission, of a live female baby who weighted 3300g with Apgar scores of 8 in one minute and 10 in five minutes. This was followed immediately by the expulsion of a fetal papyraceus which weighed 200g and had a

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crown rump length of 85mm. The third stage saw the delivery of a single placenta with both cords attached to it, examination of which confirmed a diamniotic-monochorionic placentation. The normal baby was admitted to the Neonatal Intensive Care Unit (NICU) and examined for any abnormalities, but none was discovered. Both the mother and baby were discharged home in good condition.

Discussion:

This fetus papyraceus (figure 1) with a crown rump length of 85mm probably died at 14 weeks gestation and became mummified because it had stayed more than 10 weeks before delivery [3]. Death of a twin in the second and third trimester is usually associated with several complications such as preterm labour, as was seen in this patient. Other likely complications are sepsis as a result of a dead fetus, consumptive haemorrhage and labour dystocia [9]. These were not seen in this patient. These complications are more severe when it is a monochorionic, rather than dichorionic, placentation [5, 6]. This patient was lucky to have escaped some of these complications.

The cause of fetus papyraceus is usually unknown, but it has been associated with twin-to-twin transfusion (commoner in monochorionic placenta), fetal genetic or chromosomal abnormalities and improper cord implantation, such as velamentous cord insertion [5, 10]. This case had both monochorionic placentation and velamentous cord insertion (see figure 2 & 3).

Fetus papyraceus can be diagnosed during antenatal care by ultrasonography [6, 11]. Unfortunately, this patient never had an obstetric ultrasound scan and was unbooked, which caused an intrapartum diagnosis of the condition. Even ultrasound scan can face difficulties in making a diagnosis depending on the anatomical position of the dead fetus and how early fetal demise occurred.

When fetus papyraceus is detected early, expectant management with close fetal and maternal surveillance is advised [5, 6]. Majority of patients will deliver vaginally after spontaneous onset of labour, often preterm [8]. This patient had a preterm labour and was delivered vaginally. Her obese and grossly oedematous anterior abdominal wall made auscultating the fetal heart difficult and her baby was taken for IUFD until delivered alive. Despite the availability of ultrasound scan, which would have confirmed a live baby and possibly diagnosed the fetus papyraceus before delivery, this was not used. Such assumptions and omissions are to be strongly discouraged.

In monochorionic twining, single IUFD poses a significant risk of perinatal mortality and serious neurological impairment to the surviving co-twin [12]. The risk in the surviving twin of cerebral palsy, aplasia cutis and congenital malformations such as microcephaly or hydrocephalus, absent ear and abnormalities of the heart are high [13, 14, 15]. This necessitated the admission of the live twin to the NICU for examination and observation. However, both the mother and live baby were discharged home in good condition.

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Conclusion:

The antenatal diagnosis of fetus papyraceus is usually a chance finding on obstetric scan for other problems or routinely. The primary concern for fetus papyraceus is its effect on the surviving fetus. Regular antenatal care and routine ultrasonography in pregnancy is mandatory to diagnose and manage possible complications. Where this is missed, routine placental examination to search for fetus papyraceus and establish chorionicity is mandatory.

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Consent:

Written informed consent was obtained from the patient for publication of this case report and accompanying images, after assurances of strict confidentiality. A copy of the written consent is available for review by the Editor-in-Chief of this journal.

References:

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Figure 1: Fetus papyraceus (Crown rump length of 85mm = 14 weeks gestation at death)

Figure 2: Single placenta with fetus papyraceus still attached through cord & cut cord of normal baby.

Figure 3: Velamentous insertion of cord of fetus papyraceus