

## Foetus Papyraceous: A Case Report

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Fetus papyraceous, the compressed remains of a dead twin retained in-utero after its intrauterine death in the second trimester, is an uncommon finding. It is not usually associated with adverse physical effects on the mother or surviving twin. A case of fetus papyraceous which was discovered at Dinajpur Medical College Hospital, Dinajpur. No adverse effects on the mother and surviving twin were recorded. The case is presented in this article.

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### Introduction

**F**oetus papyraceous or compressus is the compressed, mummified, parchment-like remains of a dead twin which is retained in-utero after intrauterine death in the second trimester.<sup>1-3</sup> It is usually discovered among the placenta and membranes of its well-developed twin.<sup>2</sup> The cause is thought to be death of one twin, amniotic fluid loss, or reabsorption and compression of the dead fetus.<sup>3</sup> The incidence of fetus papyraceous has been reported at 1 in 17,000 to 20,000 pregnancies.<sup>3</sup> Incidence of foetus papyraceous in twin pregnancy is 1 in 184 to 1 in 200 pregnancies.<sup>4</sup> 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 twin. But 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).<sup>5</sup> It is emphasized that a close high-risk obstetric management must be used and a careful paediatric follow up must be done afterwards.<sup>6</sup> A case of fetus papyraceous was

discovered at Dinajpur Medical College Hospital, Dinajpur which is presented here.

### Case Report

A 2nd gravida uninvestigated woman admitted in Dinajpur Medical College Hospital with complaints of 26 weeks pregnancy and lower abdominal pain. The patient had conceived spontaneously and had a history of IUD twin pregnancy at 30<sup>th</sup> weeks of pregnancy which was delivered at this hospital per vaginally without any complication 2 years back. On examination, general condition was fair except mild tenderness on lower abdomen and fundal height was more than the period of gestation. Her routine investigations and coagulation profile were sent which came in normal limits. An obstetric ultrasound examination was done which showed a viable twin ("A") with 26 weeks gestation with breech presentation with bipartal diameter of 70 mm and femur length of 50 mm and fundal posterior placenta and a non viable ("B") of 20 week of pregnancy and anterior fundal placenta. Patient was treated conservatively for 2 days and discharged with advised for regular antenatal check up. After that she was

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in regular antenatal check up. Follow up ultrasound examination was done at 32 weeks and 36 weeks of pregnancy, all reports were corresponding with her gestational periods and presentation was breech. Patient was admitted in our hospital at 38 weeks of pregnancy. The patient underwent LUCS due to breech presentation and delivered twin "A" which was alive male with an Apgar score of 8/10. Weight of live baby was 3 kg (Fig. 1) and that of placenta 400 gm. Patient delivered dead foetus papyraceous (Fig. 2) weighing about 100gm with placenta weighing 50gm. Inspection of placenta showed diamniotic dichorionic placenta. Amount of blood loss during LUCS was average. Post operative period was uneventful. Mother and baby did not have any other complication and she was discharged after 6 days.



Figure 1. Normal baby with foetus papyraceous



Figure 2. Foetus papyraceous (per operative)



Figure 3. One year of age of surviving twin. Healthy and normal milestone

### Discussion

Antenatal demise of one foetus in the late second or third trimester of twin pregnancy confronts the obstetricians with an unusual and difficult problem with regard to management of pregnancy.<sup>7</sup> The vanishing twin phenomenon is relatively common, and the prognosis for the surviving foetus is good.<sup>8</sup> In contrast single foetal death in the second or third trimester is uncommon and has been shown to be associated with increased risk of mortality and morbidity for the surviving twin.<sup>9</sup> In general, chorionicity rather than zygosity determines the risk of mortality and morbidity. Hence, it is important to determine the type of placentation by ultrasonography. The perinatal mortality of monochorionic twin pregnancies is double that of dichorionic twin pregnancies.<sup>10</sup> Earlier, foetus papyraceous was thought to be more common in monozygotic twins.<sup>11</sup> But recently Benson et al showed similar frequencies in dichorionic (12%) and monochorionic twin (11%) pregnancies.<sup>12</sup>

There is no prognostic effect of maternal age and spontaneous versus induced conception.<sup>13</sup> The primary concern of foetus papyraceous is its effect on mother and surviving co-twin. In many cases no complications to the mother or

to the surviving twin have been reported (Fig. 3).<sup>14</sup> Morbidity and mortality are mainly related to the gestational age of foetus papyraceous. If the event occurs later in the pregnancy, the morbidity is high. Maternal complications include preterm labour, infection from a retained foetus, severe puerperal haemorrhage, consumptive coagulopathy, and obstruction of labour by a low-lying foetus papyraceous causing dystocia leading to caesarean delivery.<sup>14</sup>

Causative factors for foetus papyraceous have been debated in literature. The role of velamentous and marginal insertion of placenta has been postulated.<sup>15</sup> The condition occurs more often in foetuses with genetic or chromosomal abnormalities.<sup>16</sup> Placental or foetal analysis frequently reveals diploidy, triploidy, and alternate sex chromosome on placental biopsy, foetal skin biopsies, and chorionic villous sampling.<sup>16,17,18</sup> Rare case of a foetus papyraceous due to maternal trauma has also been reported in the literature.<sup>19</sup>

The traditional approach to the demise of a twin has been deliver the survivor to avoid embolization. Cattanach et al favour conservative management until 37 weeks gestation. If foetal movements, cardiotocography, and ultrasonography show no abnormalities.<sup>20</sup> Santema et al have advocated treating impending preterm labour before 34 weeks with intravenous tocolytics.<sup>8</sup> Carlson and Towers have recommended that delivery should be considered after 32 weeks if lung maturity is documented; if the lungs are immature, steroids could be given and maturity re-evaluated afterwards.<sup>21</sup> It has been suggested that after 37 weeks pregnancy should be terminated.

### *Conclusion*

The sequelae of a single foetal death in twin pregnancy depend on the gestation and in the second and in the late third trimester there is

increase in mortality or morbidity in the surviving twin. Antenatal evaluation periodically by ultrasonography is important to reduce the potential risk. Conservative management remains the main stay but the risk of keeping the alive foetus in the hostile intrauterine environment has to be weighed against the risk of preterm delivery.

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