

## FOETUS COMPRESSUS

### (A Case Report)

by

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Foetus compressus or papyraceus is an uncommon phenomenon in twin pregnancy. When one of the fetuses dies usually there is spontaneous expulsion of both the fetuses. Other possibilities are expulsion of the dead foetus and continued growth of the remaining foetus or retention of both the dead and alive fetuses till delivery. When the dead foetus is deprived of circulation and is mechanically pressed by the living foetus it forms a foetus compressus. Following is the report of one such case.

#### CASE REPORT

Mrs. N.S., 20 year old primigravida was admitted in the labour room of Bhagalpur Medical College Hospital on 26th August at 10 a.m. Her presenting features were amenorrhoea for 9 months and intermittent pain in the abdomen for 4 hours. She never had any antenatal check-up. On examination she was pale, the pulse was 90 per minute, regular and the blood pressure was 120/76 mm. of Hg. Cardiovascular and respiratory systems were normal.

On abdominal examination the uterus was found to be 40 weeks in size.

The foetus was presenting by vertex in left occipito anterior position and the head was engaged. Foetal heart rate was 130 per minute and was regular. Painful uterine contractions

were coming on at the interval of 10 to 15 minutes. Vaginal examination revealed the cervix to be taken up, with dilatation of 5 cms. The membranes were intact and the head was at station zero. The pelvis was found to be adequate. She was sedated with 100 mg of pethidine. At 5.55 p.m. she delivered a male baby and at 6.5 p.m. the placenta was expelled spontaneously. Weight of the baby was 2 kg and of placenta was 500 gms. The placenta had a small whitish sac measuring 5.5 cms  $\times$  5 cms attached to the margin of placenta with cord like structure.

In the sac there was a compressed foetus with a thin cord attached to the same placenta. The male compressed foetus was 7.5 cms in length and was 25 gms in weight. The umbilical cords of both the fetuses were attached marginally. There were two distinct amniotic sacs (Fig. 1). No gross vascular anastomoses could be found in the placenta.

#### Discussion

According to Engelhorn intrauterine death of one twin is three times common in uniovular than binovular twins. The reason is that if one foetus has a stronger heart than the other, the circulation in the hypogastric artery of the weaker foetus will be reversed and it will be completely stopped. In due course the weaker foetus dies in uterus due to deprivation of circulation and is retained in the uterus to be expelled with its partner at the time of delivery. The live foetus grows normally and it mechanically presses the dead foetus, thus forming typical parchment like foetus called foetus papyraceus or

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compressus. Since vascular anastomoses between the two foetuses is very common in uniovular twins than in binovular, this occurrence is more prevalent in uniovular twin pregnancy.

Saxena (1969) described a similar case in uniovular twin pregnancy. Our case was also uniovular twin pregnancy.

Kadjar (1927), Engelhorn (1955), and Mills (1949) had studied the structural changes and circulation in uniovular and binovular placentae. The circulation in uniovular placentae communicate through a "Third circulation Depending on the extent of the third circulation one twin may be favoured. According to Newman (1923) 5-10% of foetal blood flowing to each placenta may return in the umbilical vein of the other twin. The favoured twin has a venous plethora, high blood pressure, enlarged kidneys and heart.

The pathology of foetus compressus was studied by Kindred (1944). The liquor amnii gets absorbed gradually or leaks due to rupture of the sac. Dehydration leads to arrest in the process of maceration in the dead foetus and thus the formation of foetus compressus.

Eastman (1950) does not consider the phenomenon of foetus compressus different from mummification. Browne (1946) considers vascular anastomoses as the aetiological factor in the production of foetus compressus. Kindred (1944) postulated that there is some special fluid secreted after the absorption of liquor.

This fluid has a preservative nature which prevents the destruction of the compressed foetus. Knotting of the cord is also one of the causes for death of one foetus in uterus.

In the present case the phenomenon was in uniovular twin pregnancy. Both the foetuses were of same sex and there was one placenta with marginal attachment of the two cords (Fig. 2).

#### Summary

1. A case of uniovular twin pregnancy with formation of foetus compressus in one twin has been reported.
2. Vascular anastomoses between the two foetuses what is called "The third circulation" may explain the phenomenon of formation of foetus compressus.

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See Figs. on Art Paper V