ABSOLUTE SHORT UMBILICAL CORD

(A Case Report)

by

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Short cord is associated with high foetal mortality. Majority of these cases have coexistent foetal malformations and they are usually born prematurely. Following is a case of congenital malformation in a foetus associated with placenta praevia and an extremely short umbilical cord. Because of its rare occurrence and paucity in the literature, the case is being reported.

CASE REPORT

Mrs. M.S., aged 20 years, a second gravida was admitted on 12-7-74 at 9-50 p.m. with the complaint of dribling of liquor for two days and painless vaginal bleeding of moderate amount for one day. She was 32 weeks pregnant. She had one previous term normal delivery. The male baby weighing 6 lbs. died on 7th neonatal day. The cause of death could not be ascertained.

Her family history and past medical history were negative for illness of any consequence. She had no antenatal check up in the past as well as in the current pregnancy.

On general examination the patient was averagely built and nourished. She was slightly anaemic. Her pulse was 80 per minute and blood pressure was 110/70 mm. of mercury. No other abnormality was observed in general survey. Abdominally the uterus was 32 weeks' size. It was well relaxed and there were no painful contractions. Breech was presenting at brim. Foetal heart sound was audible on right side at the rate of 152/minute. Inspection of the vulva revealed trace vaginal bleeding.

A provisional diagnosis of placenta praevia was made and as she was carrying only 32 weeks of pregnancy conservative treatment was decided. Her haemoglobin level was 9.2 Gm. per cent and there was no albumin in urine. Blood was sent for grouping and cross matching and one bottle of blood was kept reserved for her at blood bank. She was kept under observation.

On the following afternoon at about 12-30 p.m. she complained of labour pains. Abdominal examination revealed regularly occurring uterine contractions with absent foetal heart sounds. There was moderate amount of vaginal bleeding (500 ml. approx.). The bottle of blood reserved at bank was asked for and an examination under anaesthesia was decided at this stage. But she delivered before this could be arranged. She gave birth to a deformed female stillborn baby at 1-20 p.m. The placenta was first delivered along with the left leg. This was followed by the birth of the rest of the baby. The baby was fresh stillborn. Inspite of prophylactic ergometrine there was mild postpartum haemorrhage. One bottle of group B, Rh positive, blood was transfused. Her general condition was satisfactory all along. Lactation was suppressed by Inj. Primodian Depot (Schering A. G.). She had an uneventful puerperium and was discharged from the hospital on 16-7-74.

Her previous baby had no obvious congenital deformity. She did not give any history of drug therapy or radiation during the current pregnancy. Her blood was examined for V.D.R.L. which was negative. Fasting and

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postprandial blood sugar estimated at a later date were 80 mg. and 90 mg. per cent respectively.

Examination of the Baby

The baby weighed 1200 Gm. The crown-rump length measured 15 cm. and the crown-heel length measured 23 cm. in left side and 26 cm. in rt. side. There was deformity in both the lower limbs. The right leg was hyperextended at hip, flexed at knee and dorsiflexed at ankle (Fig. 1). The left leg was flexed at hip and knee, and was much thinner than right one. There was marked kypho-scoliosis (Fig. 2). External genitalia was normally developed. There was no other external deformity. Post-mortem examination was not allowed.

Examination of the placenta and cord

The placenta weighed 300 Gm. and was 14 cm. in diameter. There was no evidence of retroplacental haematoma or calcification. It appeared as if the placenta was directly attached to the baby. But on careful dissection the umbilical cord was observed. It was 5 cm. in length and was marginally inserted to the placenta (battledore insertion). The umbilical cord contained one artery and one vein. Histopathological examination of the placenta did not show any significant change.

Discussion

Absolute shortness of the cord is rare (Claye and Bourne, 1963; Rao, 1974). There have been case reports where the umbilical cord was very short resulting in abnormalities in labour. The reported lengths of the umbilical cord in such cases were 0.5 cm. (Eastman and Hellman, 1966), 1.5 cm. (Claye and Bourne, 1963), 2.5 cm. (Panda and Sharma, 1973), 5 cm. (Rajpal and Basu Mallik, 1966), 9.8 cm. (Rao, 1974) and 10 cm. (Sunandabai *et al*, 1974). In these cases the abdomen of the foetus was almost in contact with the placenta. There are also case reports where the umbilical cord was totally absent. (Pratt *et al*, 1969; Anjaneyulu, 1961). Mengert (1947) postulated that unusually short or long cord tend to recur in a pattern constant for a given woman.

The extreme cases of shortness of the umbilical cord are usually associated with congenital malformations and antepartum haemorrhage. Of the associated congenital deformities exomphalos is very common, but deformity of the extremities are also common and have been reported by Vare and Bansal (1971), Pandya and Sharma (1973), and Anjaneyulu (1961). The present case too had almost similar congenital deformity of the extremities. Premature separation of placenta is common in cases with short cord and they may present with antepartum haemorrhage as in the reported cases of Rajpal and Basu Mallik (1966), Pandya and Sharma (1973). The case under discussion also presented with antepartum haemorrhage. Rao (1974), however, described one case with umbilical cord of only 9.8 cm. which was neither associated with any congenital malformations nor placental separation.

The present case showed 'single umbilical artery'. There is evidence to suggest that congenital malformations are more common in cases with 'single umbilical artery' (Benirscheke and Brown, 1955; Bansal, 1970; Mukherji *et al*, 1971). On an analysis of placenta praevia cases Macafee (1945) documented that 27% of the babies lost died as a result of complications associated with the position or mode of insertion of the cord. He speculated that cord may be compressed in cases of battledore insertion and can cause intranatal death of the foetus. It is highly probable that in the present case too, the foetus died in utero due to pressure on the cord or due to placental separation as explained by Macafee.

Summary

A case with extremely short umbilical cord (5 cm.) which presented as antepartum haemorrhage at 32 weeks of pregnancy is reported. The delivery was uncomplicated except mild postpartum haemorrhage. The cord had single umbilical artery and was marginally inserted. The associated congenital malformations have been described.

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See Figs. on Art Paper V