

COILING OF THE UMBILICAL CORD ROUND FOETAL LIMBS CAUSING ANTE-PARTUM INTRA-UTERINE FOETAL DEATH

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Coiling of the umbilical cord round the foetal neck can cause intranatal asphyxia, stillbirth or neonatal death. But the hazards of cord coiling round the limbs, which is less recognised, may be potentially more dangerous because of restriction to free movements leading to ante-partum intra-uterine foetal death due to asphyxia.

Two cases illustrating the above observation are reported here.

CASE REPORTS

Case 1

P. G., primigravida, aged 32 years, term date on 1-2-69, had manifestations of moderate pre-eclamptic toxæmia, which was managed successfully by regular antenatal supervision. She complained of sudden abdominal pain with uterine contractions on the morning of 11-1-69, which was relieved by Isoxsuprine, 50 mg. tablets 4 times a day, followed by cessation of foetal movements. The foetal heart sounds were absent on the morning of 12-1-69. Labour pains started from the evening of 13-1-69 and she delivered normally a macerated male child weighing 4 Kg. 50 gms. and 55 centimetres in length, after 19 hours of labour (Fig. 1). The delivery of the

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shoulders was difficult due to extension of the right knee joint caused by two tight loops of cord round the right ankle producing a deep circular groove. The umbilical cord was 57 centimetres long. The placenta was normal. Histological examination of the cord and the placenta did not reveal any pathology.

Fasting blood sugar and sugar tolerance test were carried out and found to be normal. At each antenatal examination urine was checked routinely. There was no family history of diabetes. W.R. and V.D.R.L. tests of both partners were negative.

Case 2

S. F., aged 31 years, 4th gravida, previous deliveries normal, term date on 30-1-69, was under regular antenatal supervision. She complained of sudden abdominal pain on the morning of 27-1-69, followed by cessation of foetal movements. Labour, pains started next morning and she delivered normally a macerated male child, weighing 3 Kg. 500 gms. and 50 centimetres in length, after 8 hours of labour (Fig. 2). The umbilical cord was 72 centimetres long, passing from the umbilicus, round the foetal neck and tightly looped once round the left ankle and twice round the right ankle of the foetus. Histological examination of the cord and the placenta showed no abnormality.

Discussion

Javert (1957) pointed out that coiling of the umbilical cord round the

foetal limbs can cause intrauterine foetal death. But, Shui and Eastman (1957) stated that the lethal role assigned to cord coiling has been exaggerated. Dippel (1964) reported 5 cases of cord coiling around some parts other than the neck in a series of 1000 deliveries without any foetal or neonatal death. Spellacy *et al* (1966), in a review of 17,190 deliveries, stated that the cord was around one or other part of the foetus in 2 per cent of cases only as compared to nuchal coils in 24.6 per cent cases.

Either strangulation or vascular spasm has been thought to be the cause of foetal death in umbilical cord coiling (Brit. Med. J., 1964). Whether such a mechanism of vascular spasm plays any part when membranes are intact is doubtful. The above two cases appear to exemplify the risk to the foetus due to mechanical interference with the placental circulation as a result of tightening of the umbilical cord caused by free movements of the limbs. The other possible causes of intra-

uterine death before the onset of labour were excluded by clinical and laboratory investigations and there were no apparent congenital defects. Detection of this impending danger to the foetus at the first opportunity, such as gradual cessation of foetal movements following foetal hurry with painful uterine contractions, would have saved two valuable babies in these elderly mothers.

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See Figs. on Art Paper VIII