

CORRELATION OF THE LENGTH OF UMBILICAL CORD OF THE FOETUS WITH OUTCOME OF LABOUR

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SUMMARY

The present study is an analysis of the clinical significance of the length of umbilical cord in relation to outcome of labour. The length of the cord was measured in normal deliveries, caesarean sections, forceps and ventouse deliveries. High incidence of antepartum haemorrhage, obstructed labour and caesarean section (15%) was encountered with short umbilical cord of the foetus.

On the other hand long umbilical cord was responsible for high incidence of cord round the neck of the foetus (30%), obstructed labour, caesarean section (18%) and high perinatal mortality rate in 200 cases, compared to 200 control cases with cord length within the normal limits.

Introduction

The disposition and length of the umbilical cord in the amniotic cavity remains unrecognized till the birth of the baby. It is mostly discovered while conducting normal labour, forceps, ventouse application and caesarean section. Very rarely the stillborn baby may have loop of the cord twice or thrice round the neck. The length of the umbilical cord varies from 20 to 100 cms. (Agboola, 1978). The average length of the cord encountered in day today obstetric practice is 50 to 60 cms at term.

Materials and Methods

This study comprises of 450 cases. The periods of gestation varied between 38 to

40 weeks. The cases having any maternal or foetal complication have been excluded from the series. The parameters for short cord was 20 cms or less and long cord 100 cms or more in the present series. There were 50 cases of short cord (Group I) 200 cases with long cord (Group II) and 200 control cases with average length of the cord already stated. The cases were analysed according to age, parity and complications which may possibly be attributed to the length of the cord.

Observations

The cases were analysed according to the complications in relation to length of the cord.

Discussion

The present series comprises of the cases in whom length of the cord is pos-

From: P.M.C.H., Patna.

Accepted for publication on 15-7-87.

TABLE I

	Total No. of cases	Normal labour cases	Obstructed labour cases	A.P.H. cases	Cord round the neck cases	Caesarean section cases	Forceps cases	Ventouse cases	Perinatal mortality
Group I Short cord.	50	25 (50%)	13 (26%)	2 (4%)	Nil	15 (30%)	8 (16%)	2 (4%)	2 (4%)
Group II Long cord	200	150 (75%)	30 (15%)	Nil	60 (30%)	30 (15%)	15 (7.5%)	5 (2.5%)	2 (1%)
Group III Control	200	193 (96.5%)	Nil	Nil	5 (2.5%)	2 (1%)	5 (2.5%)	Nil	Nil

sibly responsible for the interference and complication.

Short cord was responsible for ante-partum haemorrhage, caesarean section, failed forceps and ventouse. Rao (1974) reported a case of dystocia due to cord length 9.5 cm. In one case there was inversion of the uterus in the present series.

Long umbilical cord was responsible for one, two or three loops of the cord surrounding the the neck of the foetus. According to Kan *et al* (1957) one or more loops around the neck was present in 24% of their series of 1000 deliveries. No foetal mortality or morbidity was encountered in their series. Three loops of cord round the neck was present with the cord length of 70 cms.

In the present series, obstructed labour, caesarean section and forceps rate was high with long umbilical cord compared to control cases. Walker *et al* (1960) reported normal gestation and delivery with any length of the cord between 17.8 cms to 121.8 cms.

Despite all the advancement in the modern obstetrics the accurate disposition of the cord in the amniotic cavity has not yet been confirmed. In view of the clinical significance of the umbilical cord and its impact on the outcome of labour and perinatal mortality, it is mandatory to diagnose short cord and cord round the neck of the foetus.

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