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Research Article

Clinical Study of Fetomaternal Outcome in Neonates with Cord around Neck in a Tertiary Care Hospital

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Abstract: Intra-partum finding of umbilical cord around the baby's neck is common, seen in about a third of normal deliveries. The reported incidence varies from 5.7% in India to up to 35.1% in Switzerland. With the increasing use of color Doppler in Ultrasound, nuchal cord has become a part of the report. The aim and objective of the study was to observe maternal the perinatal outcome in babies with cord around the neck. A total of 676 full term deliveries in labour were studied, with 100 cases with a single or multiple loops of cord. The cases without cord around neck served as control. The cases were chosen randomly in a study period between April 2014 and September 2014 at Adichunchangiri Institute of Medical Sciences B G Nagar. Incidence of the cord around neck in present study is 14.7% of the 676 deliveries in 6 months period. 76% babies had loose loops of cord around neck, 24% babies had tight loops of cord around neck, 68 babies had loose loop of single cord around neck, 1 patient had 3 tight loop of cord around neck. In present study 86% had 1 loop of cord around neck, 13% had 2 loops of cord around neck, 1% had 3 loops cord aroun neck.
Keywords: Nuchal cord, Perinatal mortality, Meconium.

INTRODUCTION

Intra-partum finding of umbilical cord around the baby's neck is common, seen in about a third of normal deliveries [1]. The reported incidence varies from 5.7% in India to up to 35.1% in Switzerland [2, 3]. With the increasing use of color Doppler in Ultrasound, nuchal cord has become a part of the report.

The finding of either a single or multiple loops of cord around the neck increases with increasing gestational age and with long cords. It has 2 types: Type A means that the loop/s of cord is/are loose around the baby's neck, while Type B idicated that the loop/s is/are tight. Nuchal cord usually causes mild to moderate variable decelerations during the second stage of labour because of cord compression [1].

Aim and objective

To observe maternal the perinatal outcome in babies with cord around the neck

METHODOLOGY

A total of 676 full term deliveries in labour were studied, with 100 cases with a single or multiple loops of cord. The cases without cord around neck served as control. The cases were chosen randomly in a study period between April 2014 and September 2014 at Adichunchangiri Institute of Medical Sciences B G Nagar. Maternal outcome is analyzed in terms of mode of delivery as in caesarean section or instrumental delivery. Perinatal outcome is analyzed in the newborns by means of APGAR score of the neonate at 1 and 5 minutes, NICU admission and complications till day 7 of life.

Inclusion criteria

Singleton pregnancies of 37-42 weeks gestation with cephalic presentation are selected randomly.

Exclusion criteria

Patients with any risk factors like Anemia, PIH, Congenital anomaly, Preterm delivery, Chorioamnionitis, Multi-fetal gestation etc.

RESULTS AND DISCUSSION

Incidence of the cord around neck in present study is 14.7% of the 676 deliveries in 6 months period

- 76% babies had loose loops of cord around neck.
- 24% babies had tight loops of cord around neck.
- 69 babies had loose loop of single cord around neck.

- 1 patient had 3 tight loop of cord around neck.
- 86% had 1 loop of cord around neck.
- 13% had 2 loops of cord around neck.
- 1% had 3 loops cord around neck.

Table 1: Comparison between nuchal cord group and control group

	Nuchal cord group (100)	Non nuchal cord group (576)
Vaginal delivery	70(70%)	332(57.6%)
Caesarean section	28(28%)	192(33.3%)
Instrumental delivery	2(2%)	52(9%)
Meconium		
Clear	74(74%)	340(59%)
Thin	18(18%)	169(29.3%)
Thick	8(8%)	67(11.6%)

Table 2: APGAR score

	Nuchal cord group (100)	Non nuchal cord group (576)
Apgar score at 1 minute <7	12	102
Apgar score at 5 minute <7	2	4

Table 3: Comparison between tight and loose nuchal cord group

	Loose nuchal cord group(76)	Tight nuchal cord group(24)
Vaginal delivery	29(38.1)	9(37.5%)
Caesarean section	36(47.3%)	9(37.5%)
Instrumental delivery	11(14.4%)	6(25%)
Clear meconium	56(73.6)	18(75%)
Thin meconium	14(18.4%)	4(16.6%)
Thick meconium	6(7.8%)	2(8.3%)
1 min Apgar score	9(11.8%)	3(12.5%)
5 min Apgar score	1(1.3%)	1(4.1%)

Table 4: Number of loops of cord around neck

Number of loops	Loose loops of cord around neck' (76)	Tight loops of cord around neck (24)
1	69	17
2	7	6
3	0	1

Table 5: Incidence of cord around neck

Studies	Incidence
Sheiner E *et al*. [4]	14.7%
Pregrine *et al*. [5]	18%
Mastro Battista *et al*. [6]	17%
Present study	14.7%

Vaginal delivery rate was 70% in study group and 50% in control group. Incidence of lower segment caesarean section (LSCS) with nuchal cord in this study was 45% and it was 57% in control group. Present study shows LSCS rate of 37% in tight nuchal cord group and 47% in loose nuchal cord group. Dhar *et al*. [7] found the incidence of LSCS 27.2% of case with tight nuchal cord and 15.7% with loose nuchal cords. Present study had no perinatal mortality with nuchal cord which is similar to observation of Larson JD *et al*. [8], Miser WF [9]. There is no difference between LSCS rates incidence of meconium stained amniotic fluid, Instrumental delivery rate and Apgar score between loose and tight nuchal cord groups.

CONCLUSION

The presence of a nuchal cord per se is not found to be an indication of operative delivery. Such patients require close monitoring during labour, by continuously monitoring the fetal electronic heart rate as tight and multiple nuchal loops are found to be associated with persistent variable or late deceleration [10]. Findings of this study suggest that vaginal delivery can be attempted in spite of this ultrasonographic awareness.

REFERENCES

1. Kasturi D, Marathe S, Manjunath N; A case-control study on perinatal outcome in neonates with cord around the neck in a tertiary care hospital, Hubli, Karnataka. Int J Reprod

Contracept Obstet Gynecol., 2014; 3(1): 105-108.

2. Dhar KK, Ray SN, Dhall GI; Significance of nuchal cord. Journal of the Indian Medical Association, 1995; 93: 451-453.
3. Schäffer L, Burkhardt T, Zimmermann R, Kurmanavicius J; Nuchal cords in term and postterm deliveries—Do we need to know? Obstetrics & Gynecology, 2005; 106: 23-28.
4. Sheiner E, Abramowick JS, Levy A,Silberstein T, Mazor M, Hershkovitz R. Nuchal Cord is not associated with adverse perinatal outcome. Arch Gynecol Obstet., 2006; 274(2): 81-83.
5. Peregrine E, O'Brien P, Jauniaux E. Ultrasound detection of nuchal cord prior to labour induction and the risk of caesarean 363 section. Ultrasound Obstet Gynecol., 2005; 25(2): 160-164.
6. Mastrobattista JM, Hollier LM, Yeomons ER, Ramin SM, Day MC, Sosa A *et al*.; Effects of nuchal cord on birthweight & immediate neonatal outcomes. Am J Perinatol., 2005; 22(2): 83-85.
7. Dhar Kk, Ray SN, Dhall GI; Significance of nuchal cord. J Indian Med Assoc., 1995; 93(12): 451-453.
8. Janet D, Larson MD, William F, Rayburn MD, Crosby RSS, Gary R *et al*.; Multiple cord entanglement and intrrapartum complications. Am J Obstect Gynecol., 1995; 173: 1228-12231.
9. Miser WF; Outcome of infants born with nuchal cords. Family practice service, Reynolds Army Community Hospital. Fortsill, UK. J Fam Pract., 1992; 34(4): 441-445.
10. AA Begum, H Sultana, R Hasan, M Ahmed; A Clinical Study of Fetal Outcome in Cases of Nuchal Cord. JAFMC Bangladesh. Vol 7, No 1 (June) 2011; 25-27