

Frequency of Surgical Intervention Due to Cord Around the Neck

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ABSTRACT

Objective: To see the frequency of cord around the neck.

Study Design: Retrospective Observational Study.

Place & Duration of Study: This study was carried out at Shaikh Zaid Women Hospital, CMCH, SMBBMU, Larkana from January 2012 to December 2013.

Materials And Methods: Total patient 8250 taken from Jan 2012 to Dec 2013. All cases were studied in detail with reference to course of labour, mode of delivery, interference required and maternal and fetal outcome. A detailed history was taken and general and systemic examination was done. The Muller Munro Kerr maneuver was used to assess the adequacy of the pelvis and diagonal conjugate was accurately measured.

Results: Total patient taken 8250, from Jan 2012 to Dec 2013 among them vaginally delivered 4238(51.3%), 92 have applied forcep 27(0.63%) babies delivered cord around the neck with 30 patient have applied vacuum out of which 16 (0.37%) cord around the neck. Spontaneously vaginal deliveries without surgical intervention 4116 (31.9%), out of which 1312 (15.9%) have cord around the neck. 2360 (28.6%) patient delivered through emergency LSCS. 722(17%) babies with cord around the neck and 1560 (18.9%) patient delivered through elective LSCS among them 759 (17.9%) babies delivered with cord around the neck.

Conclusions: Most of these cases delivered vaginally with minimal maternal and fetal morbidity. Frequency of surgical intervention in these cases can be reduced by proper antenatal care especially in 3rd trimester, by plotting partogram and using oxytocin judiciously during intrapartum period.

Key Words: Surgical intervention, cord around the neck and fetomaternal outcome

INTRODUCTION

Nuchal cord is defined as an umbilical cord that passes 360° around the fetal neck¹. Around 25% to 50% of nuchal cord found at any one time will resolve prior to delivery² and upto 60% of fetuses have nuchal cord present at some time during pregnancy³.

The diagnosis is not made routinely of nuchal cord until head is not engaged, however, it can be suspected due to unengaged head prior delivery conduct, with direct method of diagnosis all cardiotocograph during labour due to presence of variable deceleration in fetal heart rate, particularly if there is 'shouldering' are double variable or 'W' pattern⁴. Other indirect methods describe by fetal heart rate change following application of manual compression of fetal neck abdominal⁵. In response to acoustic vibratory stimulations⁶. More recently color Doppler imaging has been used as an aid sonographic diagnosis^{7,8,9,10}. The presence of nuchal has been associated with many different factors in the mother, fetus, umbilical cord, placenta, labour and with a less favourable fetal outcome. The impact of nuchal cord on indication of labour is unknown and there are no study have specifically studies this group

MATERIALS AND METHODS

Total patients 8250 taken from Jan 2012 to Dec 2013. All cases were studied in detail with reference of cause

of labor, mode of delivery, interference required and maternal and fetal outcome. A detailed history was taken and general and systemic examination was done. The Muller Munro Kerr manoeuvre was used to assess the adequacy of the pelvis and diagonal conjugate was accurately measured. Also cardiotocography, doppler ultrasound has been used as an aid to sonographic diagnosis. The outcome of labor, delivery and neonates were obtained from the women's care notes after delivery.

RESULTS

Total patient taken 8250, from Jan 2012 to Dec 2013. Among them 3599 (44.112%) were primigravida & 4559 (55.88%) were Multigravida^{Table No:01}. Vaginally delivery occurred in 4238(51.3%), 92 have applied forcep 27(0.63%) babies delivered cord around the neck with 30 patient have applied vacuum out of which 16 (0.37%) cord around the neck. Spontaneously vaginal deliveries without surgical intervention 4116 (31.9%), out of which 1312 (15.9%) have cord around the neck. 2360 (28.6%) patient delivered through emergency LSCS. 722(17%) babies with cord around the neck and 1560 (18.9%) patient delivered through elective LSCS among them 759 (17.9%) babies delivered with cord around the neck^{Table No: 02}. APGAR score at the time of delivery was noticed 7 in 1 & 9 in 5 minutes among 3060 patients, 5 in 1 & 7 in 5 Minutes was noticed among 4550 patients and 4 in 1 minute & 5 in 5

minutes among 140 patients^{Table No.03}. outcome of fetus obtained according to apparent aetiology and severity of cord around the neck at the time of labour. There were no neonatal death.

Table No.1: Parity

Parity	No:	Percentage
Primigravida	3599	44.112%
Multigravida	4559	55.88%

Table No.2: Outcome of labour (Mode of delivery) (n=8158)

Mode of Delivery	No: of Delivery	Percentage
SVD without surgical intervention	4116	31.9%
Forceps vaginal delivery	92	2.1%
Vacuum vaginal delivery	30	0.707%
Em-lscs	2360	60.20%
El-lscs	1560	39.795%

Table No.3: Fetal Outcome (Apgar Scores at 1-5 minutes)

Apgar at 1 Minute	Apgar at 5 Minutes	No. of Cases
7	9	3060
5	7	4550
4	5	140

DISCUSSION

This study was carried out on 8158 primigravidas and multigravidas attending labour room with floating heads at onset of labor. All the women recruited had an ultrasound scan performed by one operator in shaikh zaid women hospital larkana and outcomes were obtained for all deliveries. Although a nuchal cord has been associated with several markers of poor neonatal outcome and some groups have reported an increase in perinatal mortality^{11,12}. These studies were retrospective. Our studies report the fetomaternal outcome are associated with breech presentation, right sided fetus position, increased fetal activity, reduced fetal movement¹³, a long length and less vascular coiling of the cord^{14,15}, abnormal umbilical artery Doppler findings¹⁶, abnormal ductus venosus velocity waveforms¹⁷, a posterior placenta¹⁸, induction of labor¹⁹, variable decelerations of the fetal heart rate^{19,20,21,22}, meconium stained amniotic fluid^{19,20,21,23}, shoulder dystocia²⁴, operative vaginal deliveries²⁰, emergency lower segment cesarean section²³, IUGR^{25,26}, low apgar scores^{19,20,12,27}, increase neonatal unit admission²³, need for resuscitation¹⁹, umbilical artery acedemia^{19,28}, neonatal hypovolemic shock²⁹, neonatal anemia³⁰, dural sinus dilatation, stillbirth, poor neural development performance at 1 year, and cerebral palsy. Despite these reports, cord around the neck is

usually associated with a normal neonatal and maternal outcome. study was conducted in UK (2005) shows cord around the neck was present at 18% of delivery³¹. whereas in our studies cord around the neck was present 18.9% in Em-lscs, 17.9% in El-lscs 0.63% in forceps vaginal deliveries and 0.37% in vacuum deliveries.

CONCLUSION

Most of cases of cord around the neck delivered vaginally with minimal maternal and fetal morbidity. Frequency of surgical intervention in these cases can be reduced by proper antenatal care especially in 3rd trimester, by plotting partogram and using oxytocin judiciously during intrapartum period. cord around neck is not preventable so no need to worry because baby is getting oxygen supply via umbilical cord not from air going in trachea. so we can take precaution during delivery and during caesarean section

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