

## UMBILICAL CORD ROUND THE NECK OF FOETUS A CROSS SECTIONAL STUDY OF 500 ANTENATAL CASES

Herschel Dafal<sup>1</sup>

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**ABSTRACT: BACKGROUND:** Umbilical cord provides nutrient and blood from mothers body through placenta to the foetus this also prevents most of the diseases organisms and drugs to reach foetal body called placental barrier during normal delivery of foetus many times chord round the neck prolonged the delivery period and sometimes it give rise such a situation which leads to foetal life threatening occurrence to mother as well as foetus to prevent and emergency caesarean is to be performed <sup>(1)</sup>. **AIM:** Aim of this study is to know the position of umbilical cord in relation to position of foetus in utero. So their delivery can be safe and within time by normal labour or to plan for Lower segment caesarean section. **MATERIAL & METHODS:** This study was carried out in 500 pregnant females in three months of time and they were scanned three times in third trimester of their respective pregnancy the ultrasonographic observation of each antenatal case was performed by F.F. Sonic 4500 a real time 2D ultrasound imaging machine by using its electronic probe of convex abdominal & Convex cardiac probe. **RESULT:** 500 observed foetus data reveals that 28% have 3 loops in their neck 32% have 2 loops round their neck and 40% have one loop of chord in their neck.

**KEYWORDS:** Cord round neck, Safe delivery, Antenatal ultrasonography.

**INTRODUCTION:** Economic status of a family is directly proportional to the working lady of the family if female spouse is working it undoubtedly increase the financial wellbeing and socioeconomic status as we observed in double income & no kid family or in Double income single kid families, this pattern of working women from urban or rural or from slum area have shown a unique resemblance in their antenatal history and in sonographic observation that they prefer to take bed rest only in last trimester's last month for 21 days to 14 days against the medical advices of taking bed rest for one or two month in last trimester this type of life style they prefer to give their maximum time to new borne after their respective delivery and to provide breast milk, exclusive neonatal care to the newborn baby and to spend maximum Mothers time to give care and love to the newborn. In the economic development of the family role of working women is appreciable but cost of this development is to be bear by the foetus in antenatal period preferably in last trimester which trimester observed in sonographic study of 500 antenatal cases minimum three times in last trimester and targeted scan in 250 cases more than 3 times to know whether any of the change occurring in chord loop position or not.

**METHODS & MATERIAL:** This study of 500 antenatal females was performed by a real-time 2D scanner FF Sonic 4500 by an electronic USG probe convex in pattern this convex electronic probe have advancement on mechanical probe and linear electronic probe as convex probe explores maximum area of observation as sonic rays covers in a triangular patterns while linear electronic probe covers only its size compatible parallel area as sound rays moves in straight direction only and

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come back to produced its image on the monitor, linear probe engaged maximum abdominal surface are and only that covered area is scanned while in convex probe whether it is cardiac or Abdominal electronic probe sonar waves travel to make a triangle and come back to produced image. So it explored much more scanned areas of abdomen than its contact surface area of the mothers Abdomen. The age group of mother were from 20 yrs. to 39 yrs. varied from primipara to multipara of all casts like Hindu, Muslims, Christians of Urban, rural and slum locations and they were from housewife to working women category from low literary to high literacy educational status.

### RESULT:

Sample Size	20 - 25 Yrs.	26 - 30 Yrs.	31 - 35 Yrs.	36 - 40 Yrs.
No. of Cases 500 ANC	197	175	84	44

Table 1: Age of mother in yrs

Urban 265		Rural 128		Slum 107	
Working	Non working	Working	Non working	Working	Non working
233	32	103	25	96	11

Table 2: No. of working and nonworking mothers

		3 loops Round Neck	2 loops Round Neck	1 loops Round Neck
Cord loops seen round the neck	225	63	72	90
Cord loops not seen round the neck	212			
Cord loops seen near the neck	63			

Table 3: Sonographic Evaluation

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	Urban 265		Rural 128		Slum 107		
	Working 233	Nonworking 32	Working 103	Nonworking 25	Working 96	Nonworking 11	500
No. Loop seen round neck.	131	14	28	8	2	11	212
Loops near the neck	22	18	3	17	3		63
1 Loops round the neck	36		26		28		90
2 Loops round the neck	20		25		27		72
3 Loops round the neck	24		21		18		63
	<b>102</b>		<b>75</b>	<b>25</b>	<b>76</b>	<b>11</b>	<b>500</b>

Table 4

**DISCUSSION:** Conventional 2D real time grey scale high resolution ultrasonic imaging machine having limitation in comparison of colour flow doppler studies in particular with diagnosis of cord round the neck and cord near the neck of foetus. 3-6 chord round the neck can be easily diagnosed during last trimester of ANC by 2D real time conventional sonography as compared to second trimester of pregnancy.

In our study 45% of sample size shows umbilical cord round the neck of foetus. While E jauniaux study reveals 72% single and 94% multiple nuchal cord and in a same study by Dr. M. Kashyap of Jaipur found 47.5% had nuchal chord.

In Dr. Kashyap's study 24% went for caesarean section while in my study 60% underwent for cesarean section to prevent foetal distress. Dr. Kashyap<sup>(2)</sup> and Dr. E. Jauniaux<sup>(3)</sup> were more concerned of low apgaar score, in first and second stage of labour umbilical artery compression leading to umbilical artery acidemia<sup>(4,5,6)</sup> and they confirm that nuchal cord is a potent factor for abnormal parameter during labour from normal to cesarean section, but none of them co-relate with working ANC and Non-working ANC's association of cord round the neck. It is observed that working females reveals much more Incidence of cord round the neck of foetus or cord near the neck in those females who were spending more than 4 to 6 hours of sitting or standing position in their working place and those females who reveals two or 3 loops of cord round the neck of foetus leads to Lower segment caesarean section type of delivery.

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**CONCLUSION:** Working females reveals much more Incidence of cord round the neck of foetus or cord near the neck those females who were spending more than 4 to 6 hours of sitting or standing position in their working place. Those females who reveals two or 3 loops of cord round the neck of foetus in sonography they underwent Lower segment caesarean section type of delivery to prevent foetal distress while labour.

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### AUTHORS:

1. Herschel Dafal

### PARTICULARS OF CONTRIBUTORS:

1. Assistant Professor, Department of Community Medicine, Gandhi Medical College, Bhopal, Madhya Pradesh, India.

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### NAME ADDRESS EMAIL ID OF THE CORRESPONDING AUTHOR:

Dr. Herschel Dafal,  
Assistant Professor,  
Department of Community Medicine,  
Gandhi Medical College, Bhopal,  
Madhya Pradesh, India.  
E-mail: hdafal@gmail.com

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