Outcome of Labor in Nullipara at term with Unengaged vertex

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Abstract:

Background: Unengagement of the head in primigravida has long been considered a possible sign of cephalopelvic disproportion. It is associated with a higher risk of obstructed labor. **The aim** of this study was to; assess outcome of labor in nullipara at term with unengaged vertex. **Setting** this study was conducted in labor and premature Hospital at Zagazig Maternity Hospitals. **Subjects:** a representative sample of 200 parturient women (100 had engaged head and 100 had unengaged fetal head) was recruited for this study. **The tools** used for data collection were; an interview questionnaire sheet, a clinical assessment form, the partograph, a summary of labor sheet and a neonatal assessment sheet. **The results** of the present study revealed that in more than three fifth (63.0%) of women with unengaged head the cause was unknown but it was most common among those with deflexed head (25.0%), they also had significantly longer first stage of labor (p=0.000). Cesarean section rate was significantly found to be more in the unengaged group being 35.0%. Most of the C-sections were carried out due to failed labor progress (76.9%). Patients with unengaged fetal head had significantly lower Apgar scores in 1st (p=0.000) and 5th min (p= 0.446). **Conclusion:** It can be concluded that, patients with unengaged vertex are at higher risk for cesarean delivery due to arrest disorders as well as lower fetal APGAR scores. **Recommendations:** The study recommended that, the watchful expectancy and timely intervention, especially in cases where no etiological factor is found, by blotting a partogram and using oxytocin judiciously when labor appears to be taking a protracted course, most of the women with unengaged head will deliver vaginally with minimal maternal and fetal morbidity.

Keywords: engaged, unengaged, nullipara, outcome

Introduction:

Labor is the process by which regular painful uterine contractions bring about effacement and dilatation of the cervix and descent of the presenting part, ultimately leading to expulsion of the fetus and placenta from the mother [(1)]

Engaged vertex is defined as, the mechanism by which the biparietal diameter—the greatest transverse diameter of the presenting part (of the fetal head) passes through the pelvic inlet. Although the engagement of the fetal head is usually regarded as a phenomenon of labor, in nulliparas it commonly occurs during the last few weeks of pregnancy. When it does so, it is confirmatory evidence that pelvic inlet is adequate for that fetal head. Failure of the fetal head to engage in early labor is a greater indicator of operative birth. [(2)]

In many multiparous and some nulliparous women, the fetal head is freely movable above the pelvic inlet at labor onset. In this circumstance, the head is sometimes referred to as "floating." A normal-sized head usually does not engage with its sagittal suture directed anteroposteriorly. Instead, the fetal head usually enters the pelvic inlet either transversely or obliquely. [(3)]

According to Ward and Hisley, the engagement of the presenting part decreases the upward pressure on the diaphragm result in easier breathing. But once the baby has shifted his position down into the women pelvis, the downward settling may lead to; leg cramps, increased pelvic pressure, urinary frequency, venous stasis, causing edema in the lower extremities. As well as increased vaginal secretions, due to congestion in the vaginal mucosa. (4)

Iqbal and Sumaira, mentioned that, the most common cause for unengaged fetal head at term or onset of labor was deflexed head followed by cephalopelvic disproportion, loops of cord around the neck, pre-labor rupture of membranes, hydrocephalus, and polyhydramnios. Many primigravida with high fetal head can be given a trial of labor and can be successfully delivered vaginally. Finding the cause, therefore, is the first step towards spontaneous or assisted vaginal delivery. (5)

The fetal head would remain high whenever there is obstruction in powers, passages and the passenger. This pertains to both bony as well as soft tissue aspects of mother and fetus and include; uterine and extra uterine causes such as; cephalopelvic disproportion (CPD), fetal malposition, large size of fetus, soft tissue masses in the pelvis "uterine fibroids, ovarian tumors." Placenta previa and even faecal impaction has been also reported to obstruct descent of fetus in labor. (6)

Significance of the study:

From clinical observations, it was observed that unengaged vertex at the onset of labor is associated with maternal, fetal, and perinatal complications among women delivering at Zagazig University hospitals. Yet a cross sectional analytical study to provide evidence for such problem and its effect on mother and fetus is scarce. Since high quality care is based on procedures and interventions that have been justified by scientific research "evidence based research."Therefore, the present study was undertaken to determine the outcome of labor in nulliparous women with unengaged head. This may help in offering the proper and timely management and reduce maternal and neonatal morbidity. (7)

Aims of the study:

The aim of the current study was to: Determine outcome of labor in nullipara at term with unengaged vertex

Research questions:

What is the maternal and neonatal outcome of labor among parturient nullipara with unengaged vertex?

Subjects and methods:

Research design:

A descriptive design was adopted in this study.

Setting:

This study was conducted in labor and premature Hospital at Zagazig Maternity Hospitals.

Subjects:

A total of 200 cases were studied over 7 month's period. Among these 100 had engaged head and 100 had unengaged fetal head. Women were eligible for recruitment in the study if they met the following inclusion criteria:

- Primigravida with single living fetus and cephalic presentation
- Intact membranes and no history of vaginal bleeding.
- Full term gestation between 37-41 weeks of gestation.

- In early labor , regular uterine contractions and No induction of labor

Exclusion criteria:

Those with skeletal deformity, intrauterine growth restriction, previous uterine surgery, ante partum hemorrhage and multiple gestations were excluded. Similarly primigravida who presented with medical or obstetrical complications were excluded from the study.

Tools of data collection:

Data collection was done through the use of the following tools:

Tool (1): The interview questionnaire form: It was developed by the researcher for collection of the following data:

- Socio-demographic data such as; women's age, level of education, occupation and social condition
- Current pregnancy condition which includes the history of ANC received and problems encountered during pregnancy.

Tool (2): Clinical assessment on admission to labor room and at the beginning of patient's recruitment: which included data about the general examination, local abdominal and P/V examination and investigations required; to find out; B.P, weight, fundal height, fetal lie, position and presentation, FHS**.** The level of engagement was assessed and Bishop Score was estimated.

Ultrasonography was done to confirm fetal gestational age, fetal viability, and fetal weight ….etc.

Tool (3): Partograpg: this was used to record data related to diagnosis of labor, fetal condition, labor progress, as well as maternal condition.

Tool (4): Summary of labor record: included data about the mode of delivery, the type, and indications of CS, placental delivery, duration of the stages of labor as well as the conditionof the uterus and perineum after labor and any problems encountered.

- As for neonatal assessment, data concerning the Apgar score at first and fifth minute, birth weight need for resuscitation as well as admission to NICU were all recorded.
- Care Unit (NICU).

Content validity:

The tools were tested for content validity by five experts in the field of obstetrics and gynecological nursing. The recommended modifications were done and the final form was ready for use.

Pilot study:

A pilot study was carried out on a sample of 20 parturient women to test the study tools in terms of clarity and feasibility, and the time required to be applied. Necessary modifications were done.

Field study:

Data collection took a period of 7 months from the fist of March 2013 to the first of October 2013. After getting the official permission, the pilot testing of the study tools was done and analyzed. The researcher interviewed the women and explained the purpose of the study, and obtained their verbal consent. Patients were selected according to the inclusion and exclusion criteria. After taking informed consent and reassuring patients regarding expertise and confidentiality, those with unengaged fetal head were placed in the first group (group A) and those with engaged fetal head in the second group (group B).

Detailed history was taken regarding parity, duration of pregnancy, and history of labor pains. Examination was done including general examination (B.p, height, weight), abdominal examination for fudal height, lie, presentation,

engagement, palpable uterine contractions and fetal heart rate. Pelvic examination for pelvic assessment and estimation of Bishop score.

Ultrasonography was done to confirm the above mentioned findings. Duration of the latent phase was measured and patients with inadequate uterine contraction were augmented with oxytocin. The course of labor in the two groups was recorded on the paragraph. All patients were studied in detail with reference to the course of labor, intervention required, mode of delivery and feto-maternal outcome

Administrative and ethical considerations:

An official permission was obtained by submission of an official letter from the Faculty of Nursing to the responsible authorities of the study setting to obtain the permission for data collection. Nursing and medical staff responsible for the patients were approached to gain their cooperation. All ethical issues were taken into consideration during all phases of the study.

Statistical analysis:

After the collection of data, it was revised, coded and fed to statistical software SPSS version 16. The statistical analysis used considered all tests to be T test with alpha error = 0.05. Microsoft office Excel software was used to construct the needed graphs. After collection of data, it was revised, coded, and fed to statistical software SPSS version 16. The statistical analysis used T test with alpha error = 0.05. Microsoft office excel software was used to construct the needed graphs. After data coding the following data manipulations were done.

Results:

Table (1): Showed that as regards age, the table shows no statistical significance difference between the two group (X^2 =1.9, p= 0.390). The maximum number of cases was in the age group between 21-25 years. Meanwhile, the percentage of women with secondary or university education was higher in the control group (95.0%) compared to the study group. Differences observed are statically significant (X^2 =26.8, P= 0.000*). Moreover, the majority of women in the two groups were housewives (96.0% vs. 93.0%) with no difference of statistical significance.

Table (2): showed that women in the unengaged head group were more likely to have higher gestational age "≥ 40 weeks" compared to those in engaged head group (35.0% vs. 29.0% weeks) However, difference observed is not statistically significant. However, more women in control group (92.0%) had antenatal care more than four times compared to 78.0% of women in the study group. Difference observed was statistically significant (X^2 =7.7, P = 0.006*).

Table (3): Demonstrated that distribution of women according to the general examination on admission to the labor room. The mean weight and height were almost similar in both groups. However, women in the unengaged head group were more likely to be shorter than the control group (167.0 vs. 170.0), but with no statistical significant difference. However, less number of women in the unengaged head group (96 vs. 98) had normal CTG findings compared to those in the control group, but with no statistical significant difference.

Table (4): showed that the total numbers of parturient women with unengaged and engaged fetal head were divided "on admission to labor room" into five groups based on station of their fetal head. As showed in table 4, the majority of the study group (89.0%) had a station of -1 or -2. However, those in the control group (87.0%) were mostly admitted at 0

station and only 13.0% who had +1 station.

Table (5): showed that in the majority of women (85.7%) in the study group the fetal head engaged during the active phase of labor (between 4-7 cm). Only 11.7% of the study group who showed ≥8 cm at 0 station of the fetal head. Difference observed was statistically significant (X^2 =87.5, P= 0.000*).

Table (6): indicated that women in the unengaged group show abnormal uterine contractions during the early active phase together with higher percentage of increased fetal heart rate.

Table (7): indicates a statistical significance difference among the two groups regarding the condition of the membranes at 0 station, where almost one fourth (25.9%) of women with unengaged vertex had their membranes being ruptured in contrast to only 13.0% among the engaged head with statistical significant difference (X^2 =4.9, P=0.028*). Meanwhile, almost one fourth (27.2%) of women with unengaged vertex had meconium stained compared to the control group 12.1%. Moreover, women who had unengaged vertex were significantly more likely to receive an increasing dose of oxytocin infusion than the engaged group (20.0% vs. 6.0%). The difference observed is statistically significant (X^2 =8.7, P=0.003*).

Table (8): showed that the mean duration of the first stage among the study group was longer than the control group (6.3±1.3 vs. 4.7±1.1 respectively). The difference observed is statistically significant (Z=7.3, P=0.000*). However, the duration of the second stage of labor was slightly shorter and partially similar during the third stage in the study group compared to those in the control group, but with no statistical significant difference (36.6±11.1, 5.8±13.1 vs. 38.2±9.4, 5.6±1.5 respectively).

Figure (1): Illustrated that, in more than three fifth of women (63.0%) with unengaged head the cause was unknown. However, deflexed head was the most common reason for non engaged head (25.0%) followed by big size baby >4kg (5.0).

Figure (2): showed that almost one third of women in the study group (35.0%) had caesarean delivery compared to 12.0% in the control group. The difference observed is statistically significant (p=0.000*). It is also evident that, emergency C.S was higher in study group than the control group but with no statistical significant difference.

Figure (3): showed that the failure in labor progress was the most common indication in the study group 76.9% versus 23.0% among the control group, followed by fetal distress in 1st stage of labor (73.3% vs. 26.6% respectively).

Figure (4): showed that fetal Apgar at the first minute was found to be abnormal (less than 7) in the majority of the study group (93.0%) compared to those in the control group (31.0%). Difference observed is statistically significant (t=8.3 & P=0.000*). At the fifth minute the mean Apgar score of the study group showed lesser improvement than the control group (9.1 ± 1.6 vs. 9.6 ± 1.4). The difference observed is statistically significant (t=2.4 & P=0.018*).

Discussion:

According to the present study finding, the maximum number of cases was in the age group between 21-to less than 25 years with the mean age among the unengaged group slightly more than the engaged group with no statistically significant difference. This has been also reported in other communities; for instance [7] study in India and [3] study in India who indicated that the maximum number of

cases was in age group of 22-25 years. On the other hand, [8] found no difference in the mean age between the engaged and unengaged groups. This discrepancy with the present study might be due to the fact that almost all women in the present study had weeks of gestation within the normal range at the start of labor.

The present study finding indicated that women in the unengaged head group were more likely to have higher gestational age (≥ 40 weeks) than the engaged group. This contradicts the findings of [8] who found that mean gestational age was almost similar in the two groups and slightly lower than the mean age of the present study. Meanwhile, all women in the two groups had received antenatal care during their current pregnancy, starting from the first trimester. But, women in the unengaged group had less number of visits compared to the control group. This is an important factor in the outcome of pregnancy since there is evidence that compliance to ANC is associated with maternal and fetal outcome. [9]

The current study results revealed that in more than three fifth of women with unengaged head the cause was unknown. Meanwhile, deflexed head was the most common probable factor for unengaged head followed by big size baby >4kg, loop of cord around neck and polyhydramnios. This finding is in partial agreement with [5] study in Lahore who found that in more than two fifth (46.0%) of women with unengaged head the cause was not known, but it was most common among those with deflexed head (25.0%), CPD (20.0%), or with loop of cord around neck (4.0%). On the other hand, [6] study in Pakistan, have reported that almost one third 19 (32.8%) of women had no apparent cause for the non engagement of the head. But, fetal mal-position in (17.2%), large fetal size in 5 (8.6%) women, cord around fetal neck (6.9%) and CPD (0.7%) were reported as possible causes of high fetal head.

The majority of women in the unengaged group had -1 and -2 station on admission to labor, compared to none in the engaged group who were mostly admitted at 0 station. In this respect [3] study in India found that out of 130 primigravida with unengaged head at term, 40 cases had free floating head, 57 had their vertex was at -3 station, 28 cases had -2 station and 5 cases at term had -1 station at the onset of labor. The discrepancies between the present study finding and the previous one might be related to the setting and size of the sample as well as its inclusion criteria.

Most of the fetal head engagement in the study group significantly occurred during the active phase of labor (p=0.000). Similarly [10] study in India "about the relationship of time of engagement of head in Primipara with spontaneous onset of labor," have reported that, engagement occurred mostly (88.0%) during the active phase of labor. In addition, [11] reported that the engagement occurred in 95.0% during active phase and 5.0% in the latent phase of labor. Recently, [3] demonstrated that the engagement occurred in 93.0% during the active phase of labor and 4.3% in latent phase and it did not occur in 3.7%.

Moreover, women in the unengaged group had significantly more percentage of rupture of membranes at 0 station, meconium stained, and increasing need for oxytocin. In congruence with this [12] in India reported that, among 62 primiparas with floating fetal heads at term, the membranes ruptured spontaneously before onset of labor in 16 patients, and in 24.0%, artificial rupture of the membranes was

performed in the first or second stage to facilitate a trial or test labor. In addition, [5] have shown that, the augmentation of labor with oxytocin was less in women with engaged head compared to the control group (72.0% vs. 33.0% respectively).

The present study findings also point to a longer duration of the first stage of labor in the unengaged group (Z=7.3, P=0.000*) In this respect [13] demonstrated that higher stations at the onset of labor were associated with an increase in the duration of labor and in the incidence of dysfunctional labor patterns. These results were consistent with the study conducted by [5, 7]

The current study has also demonstrated that in the unengaged group, failure of labor progress was the most common indication of CS followed by fetal distress. Similar finding was reported by [14] in Santa Clara in their study about risk of cesarean delivery in nulliparous women at greater than 41 weeks' gestational age with an unengaged vertex. They have indicated that most of the cesarean deliveries were performed for arrest of dilation or descent: 78 of 94 cesarean sections in the unengaged group were performed for arrest of dilation or descent, whereas 12 of 94 were performed for fetal intolerance to labor.

As regards fetal outcomes, the mean Apgar score at the first and fifth minute was lower among newborn of women with unengaged vertex compared to those in the engaged group with statistical significant difference (p= 0.000*, 0.018*). The difference was more evident in the first minute. These findings are in agreement with [8,15,16] The findings might be explained by the problems generated due to failure of labor progress, and longer duration of the active phase of labor which interfere with uteroplacental blood flow and lower oxygen supply to the fetus. [17]

Conclusion:

According to the findings of the present study, it can be concluded that the lower segment cesarean section was the mode of delivery in almost one third of these patients, most commonly due to arrest disorders or fetal distress. There was no serious maternal complication among the study group except third and fourth degree perineal tear. But, they had big size babies and there were two neonatal deaths, low Apgar score which is evident in the first minute as well as higher percentage of asphyxia.

Recommendations:

On the basis of the most important findings of the study, the following recommendations are suggested:

- Watchful expectancy and timely intervention, especially in cases where no etiological factor is found, by blotting a partogram and using oxytocin judiciously when labor appears to be taking a protracted course, most of women with unengaged head will deliver vaginally with minimal maternal and fetal morbidity.
- Written clinical guideline or nursing protocol for the management of patient with unengaged fetal head at the onset of labor should be developed and used by the nursing staff.
- A true randomized clinical trial is recommended to provide further confirmation of the present study findings.
- Nurses knowledge about the problem of unengagement of the head at the onset of labor must be periodically upgraded through scientific workshops, in-service training, because nurses have a

significant role and profound impact in the management of this condition.

Table (1): Distribution of the studied women according to their socio-demographic characteristics

Socio demographic data	Groups				X^2	P
	Unengaged head (n=100)		Engaged head (n=100)			
	No	%	No	%		
Age						
▪ <20	12	12.0	18	18.0	1.9	0.390
▪ 20-	67	67.0	66	66.0		
▪ 25-37	21	21.0	16	16.0		
Range	17-37		18-35			
Mean ± SD	22.5 ± 3.4		21.9 ± 3.2		t=1.2	0.245
Education						
▪ Illiterate	22	22.0	4	4.0	26.8	0.000*^
▪ Preparatory	11	11.0	1	1.0		
▪ Secondary	55	55.0	71	71.0		
▪ University	12	12.0	24	24.0		
Occupation						
▪ House wife	96	96.0	93	93.0	0.89	0.352
▪ Working	4	4.0	7	7.0		

^ P value based on Mont Carlo exact probability ** P < 0.05 (significant)*

Table (2): Distribution of the studied women according to Current pregnancy condition (n=200)

Current pregnancy condition	Groups				X^2	P
	Unengaged head (n=100)		Engaged head (n=100)			
	No	%	No	%		
Gestational age at the time of delivery						
▪ 37 wks	8	8.0	14	14.0	2.2	0.333
▪ 37-39	57	57.0	57	57.0		
▪ 40	35	35.0	29	29.0		
▪ Mean ± SD	39.0 ± 1.0		38.8 ± 1.0		t=1.2	0.242
Antenatal care					NA	NA
▪ Yes	100	100.0	100	100.0		
Onset of antenatal care						
▪ 1st trimester	89	89.0	91	91.0	0.22	0.637
▪ 2nd trimester	11	11.0	9	9.0		
Number of antenatal care visits					7.7	0.006*
▪ <4	22	22.0	8	8.0		
▪ >4	78	78.0	92	92.0		

** P < 0.05 (significant)*

Table (3): Distribution of the studied women according to their general condition of the mother and the fetus on admission to labor room

General examination on admission	Groups		t	P
	Unengaged head(n=100)	Engaged head (n=100)		
Weight				
▪ Minimum	60.0	57.0		
▪ Maximum	98.0	100.0	0.44	0661
▪ Mean	81.1	81.7		
▪ SD	9.1	10.2		
Height				
▪ Minimum	140.0	140.0		
▪ Maximum	167.0	170.0	0.38	0.707
▪ Mean	157.8	158.5		
▪ SD	11.1	14.5		
SBP				
▪ Mean	115.2	116.3	0.89	0.374
▪ SD	8.4	7.8		
DBP				
▪ Mean	74.7	75.4	0.75	0.452
▪ SD	6.6	6.4		
CTG on admission				
▪ Normal	96	98	$X^2 = 1.2$	0.543^
▪ Tachycardia	3	2		
▪ Bradycardia	1	0		

t: Independent samples t-test Z: Mann-Whitney test for two independent samples
** P < 0.05 (significant)*

Table (4): Distribution of the studied women according to fetal head station on admission to labor room

Station	Groups				X^2	P
	Unengaged head (n=100)		Engaged head (n=100)			
	No.	%	No.	%		
▪ -3	11	11.0	0	0.0		
▪ -2	44	44.0	0	0.0		
▪ -1	45	45.0	0	0.0	84.6	0.000*
▪ 0	0	0.0	87	87.0		
▪ 1	0	0.0	13	13.0		

** P < 0.05 (significant)*

Table (5): Distribution of the time of engagement in the two studied groups according to their cervical dilatation (n=200)

Cervical dilatation	Time of engagement (0 station) in the two groups				X^2	P
	Unengaged head (n=77)		Engaged head (n=100)			
	No.	%	No.	%		
▪ 3cm	2	2.6	100	100.0	87.5	0.000*^
▪ 4-5	11	14.3	0	0.0		
▪ 6-7	55	71.4	0	0.0		
▪ ≥8 cm	9	11.7	0	0.0		

^ P value based on Mont Carlo exact probability ** P < 0.05 (significant)*

Table (6): Distribution of the studied women according to the duration of labor

Partograph data at 0 station	Groups				MCP
	Unengaged head (n=77)		Engaged head (n=100)		
FHR	No.	%	No.	%	
▪ 120-160	74	96.1	98	98.0	0.958
▪ >160	3	3.9	2	2.0	
Uterine contraction Latent phase					
▪ Normal (regular, 5-20min apart and lasting 30-45sec)	2	100	100	100.0	NA
▪ Abnormal (irregular, >10min apart and lasting less than 20sec)	0	0.0	0	0.0	
Active phase					
▪ Normal (regular, 3-5min apart and lasting 45-70sec)	56	84.8	0	0.0	NA
▪ Abnormal (irregular, >10min apart and lasting less than 40sec)	10	15.2	0	0.0	
Transitional				0.0	
▪ Normal (regular, 2-3min apart and lasting 60-90sec)	9	100	0		NA
▪ Abnormal (irregular, >3min apart and lasting less than 60sec)	0	0.0	0	0.0	

NA= the test not applicable

Table (7): Distribution of the time of engagement in the study groups according to partograph findings

Partograph data at 0 station	Groups				X^2	P
	Unengaged head (n=77)		Engaged head (n=100)			
	No.	%	No.	%		
Membranes condition at 0 station						
▪ Intact	57	74.0	87	87.0	4.9	0.028*
▪ Ruptured	20	25.9	13	13.0		
Mode of membrane rupture (N=33)						
▪ Spontaneous	12	36.3	10	30.3	1.1	0.314
▪ Artificial	8	24.2	3	9.0		
▪ Amniotic fluid						
▪ Clear	11	33.3	9	27.2	0.66	0.413
▪ Meconium stained	9	27.2	4	12.1		
Need for Oxytocin (N=100)						
▪ Normal dose	80	80.0	94	94.0	8.7	0.003*
▪ Increasing dose	20	20.0	6	6.0		

Table (8): Distribution of the studied women according to the duration of labor

N.V.D data	Groups		Z	P
	Unengaged head (n=65)	Engaged head (n=88)		
Length of first stage from the time of admission(hrs)				
▪ **Mean**	6.3	4.7	7.3	0.000*
▪ **SD**	1.3	1.1		
▪ **Median**	6.0	4.5		
Length of second stage(min.)				
▪ **Mean**	36.6	38.2	1.2	0.219
▪ **SD**	11.1	9.4		
▪ **Median**	30.0	35.0		
Length of third stage(min.)				
▪ **Mean**	5.8	5.6	0.42	0.637
▪ **SD**	13.1	1.5		
▪ **Median**	5.0	5.0		

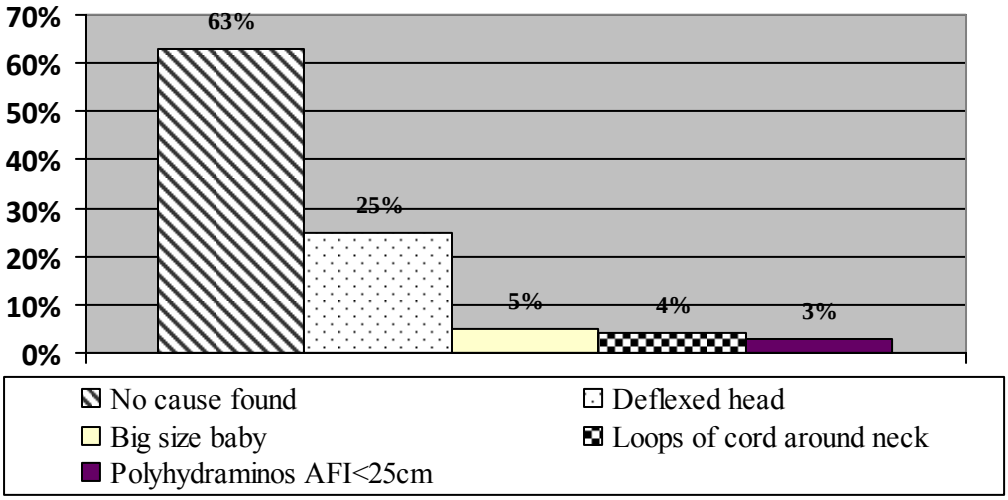

Figure (1): Distribution of the study group according to apparent reasons of non engagement of the head as diagnosed by the physician (n=100)

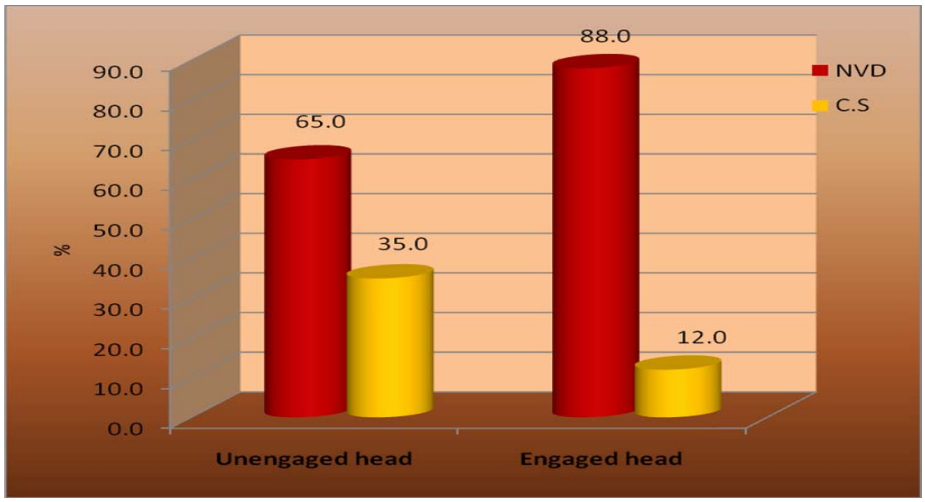

Figure (2): Distribution of the studied women according to the mode of delivery

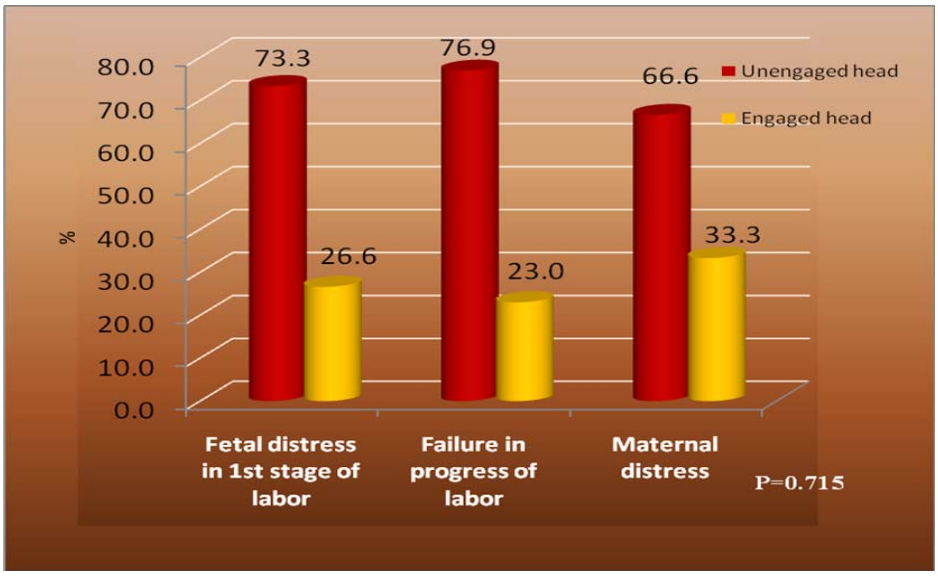

Figure (3): Distribution of the studied women according to the Indication for caesarean section

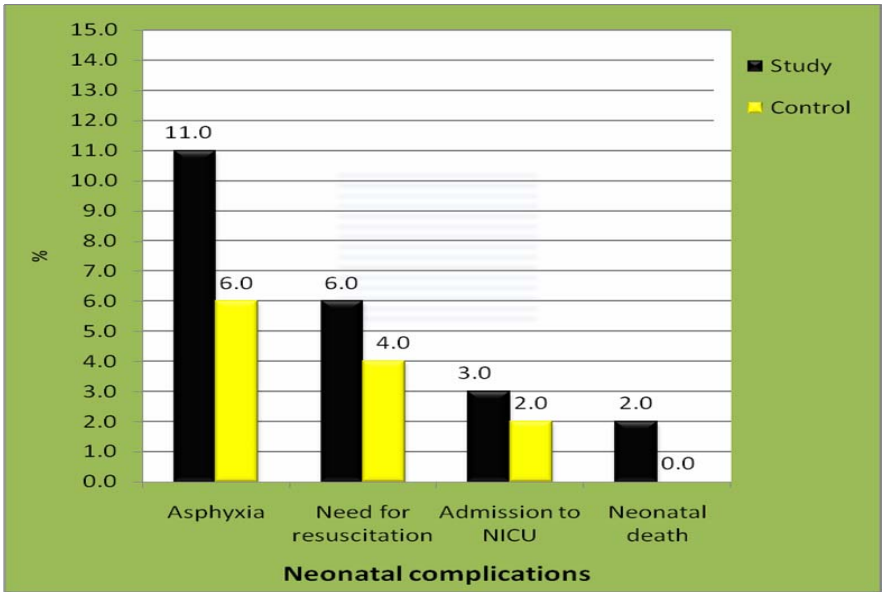

Figure (4): Distribution of the studied women according to neonatal complications

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نتاج الولادة للبكريه بعد اكتمال مده الحمل مع تأخر انحشار رأس الجنين في الحوض

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مقدمة:
عدم إنحشار رأس الجنين في الحوض عند المرحلة النشطة من الولادة في السيدات البكريات هو إشارة تنبؤية سيئة للولادة المهبلية الناجحة. حيث أن معدل الولادة القيصرية هو من ٦ ال٨ مرات أعلي في السيدات اللائي تبدأن الولادة مع عدم إنحشار رأس الجنين في الحوض عن السيدات اللائي تبدأن الولادة مع إنحشار جيد لرأس الجنين في الحوض.

الهدف من البحث:
أجريت هذه الدراسة لتقييم تقدم الولادة في السيدات البكريات مع عدم إنحشار رأس الجنين في الحوض عند بداية الولادة.

طرق وأدوات البحث:

عينة و مكان البحث:
اشتملت العينة على ٢٠٠ سيدة بقسم النساء والتوليد بمستشفيات جامعة الزقازيق. وقد تم تقسيم العينة إلى مجموعتين:

المجموعة الأولى: تكونت من١٠٠سيدة لديهن عدم انحشار لرأس الجنين في الحوض.

المجموعة الثانية: اشتملت على ١٠٠سيدة لديهن إنحشار لرأس الجنين في الحوض عند بداية الولادة.

وقد استغرقت الدراسة الفترة من بداية مارس ٢٠١٣ إلى بداية إكتوبر٢٠١٣.

أدوات جمع البيانات:

١. استمارة استبيان لتجميع بيانات عن السيدات مثل البيانات الديموجرافية ومعلومات عن الحمل الحالي .
٢. استمارة فحص السيدة عند الدخول إلي غرفة الولادة وتتضمن هذه الاستمارة قياس العلامات الحيوية للسيدة والعمر الجنيني.... الخ
٣. البارتوجراف: تم استخدامه للسيدات اللائى أجريت لهن ولادة طبيعية، لتجميع البيانات الخاصة بحالة الجنين والأم ومدى تقدم الولادة خلال المرحلة الأولى للولادة.
٤. ملخص الولادة: ويحتوى على بيانات خاصة بنوع الولادة، أسباب حدوث الولادة القيصرية، حالة المشيمة بعد الولادة، مدة الولادة والمضاعفات التي حدثت للأم أثناء وبعد الولادة.
٥. استمارة تقييم حالة المولود: و تحتوى على مقياس أبجار في الدقيقتين الأولى والخامسة والمضاعفات التي حدثت للمولود بعد الولادة.

النتائج: وقد أسفرت نتائج البحث عن التالى :

- العدد الأقصي من الحالات يقع في المجموعة العمرية ٢١-٢٥ سنة وكن ربات منزل.
- السيدات اللائي لديهن عدم إنحشار لرأس الجنين في الحوض علي الأرجح أن يكون لديهن عمر رحمياعلي مقارنة بأولئك اللائي لديهم إنحشار لرأس الجنين في الحوض(٣٥% مقابل ٢٩% أسبوع) ولكن مع عدم وجود فروق دالة احصائيا.
- من ناحية أخرى العوامل المحتملة والأكثر شيوعا لعدم إنحشار رأس الجنين في الحوض بين المجموعة الدراسية كان عدم الانثناء الكامل لرأس الجنين(٢٥%) ويليه كبر حجم الجنين أكثر من ٤ كيلو جرام(٥٠%) والتفاف الحبل السري حول رأس الجنين في(٤%) ثم زيادة كمية السائل الامينوسي حول الجنين (٣%).
- غالبية النساء في المجموعة الدراسية(٨٥,٧%) حدث إنحشار لرأس الجنين أثناء المرحلة النشطة من الولادة ما بين ٤ الي ٧ سنتيمتر وفي ١١,٧% حدث إنحشار لرأس الجنين بعد ٨ سنتيمتر.
- ثلث النساء تقريبا في المجموعة الدراسية (٣٥%) كانت ولادتهن قيصرية مقارنة بـ ١٢% في المجموعة القياسية، لذلك فإن الاختلاف الذي لوحظ يعتبر هام بشكل إحصائي (p =0.000*) وفي هذه الأثناء كان السبب الأكثر شيوعا للولادة القيصرية هو فشل في تقدم عملية الولادة ويليه اعياء الجنين في المرحلة الأولي من الولادة.
- عدم إنحشار رأس الحنين في الحوض له تأثيرات ضارة علي نتائج الولادة لدي الأمهات مقارنة بالنساء اللائي لديهن انحشار لرأس الجنين في الحوض لذلك علي الأرجح كان لديهن نزيف بعد الولادة والإصابات

التناسلية مقارنة بأولئك في المجموعة القياسية لكن بدون اختلاف هام احصائيا (١٩%-٣% مقابل ١٠%-٢% على التوالي) ،وفيما يتعلق بدرجة اصابة منطقة العجان لوحظ بأن الاصابة من الدرجه الثانية والثالثة والرابعة أكثر شيوعا مابين النساء في المجموعة الدراسية مقارنة بالمجموعة القياسية.

- عدم إنحشار رأس الجنين في الحوض كان له آثار ضارة على المواليد. حيث أدى إلى انخفاض في درجة أبجار، والحاجة إلى مزيد من الإنعاش، والحاجة الى دخول لحضانات الاطفال، وبالإضافة إلى ذلك وفيات المواليد ولكن بدون إختلافات هامة إحصائية بين المجموعتين

الخلاصة: وعلى ضوء هذه النتائج فأننا نستخاص من هذا البحث:
كانت نسبة الولادة القيصرية أكبر في السيدات اللاتي لديهن تأخر في إ نحشار في رأس الجنين وكن معرضات إلي زيادة مدة الولادة وخاصة مدة المرحلة الأولي ، كما كان لديهن تأثيرات ضارة أثناء عملية الولادة مثل حدوث نزيف مابعد الولادة وكذلك الاصابات التناسلية وتمزق العجان وإلي حدوث تأثيرات ضارة علي الجنين مثل إنخفاض في درجة أبجار، الحاجة إلى مزيد من الإنعاش، وأكثرهن نسبة لدخول الحضانات . وبالإضافة إلى ذلك وفيات المواليد.

التوصيات:
فى ضوء النتائج الرئيسية للدراسة الحالية تم اقتراح التوصيات التالية:

- التشخيص المبكر لعدم انحشار رأس الجنين في الحوض ومعرفة السيدات الأكثر عرضة لعدم إنحشار رأس الجنين في الحوض قد يساعد في تحسين نتائج الولادة عن طريق الحد من المضاعفات التى قد تحدث للامهات وحديثى الولادة.
- اذا إستخدم التوقع اليقظ والتدخل المناسب في هذه الحالات خصوصا اللائي ليس لديهن سبب واضح في عدم إنحشار رأس الجنين في الحوض مع الإستخداام الجيد للبارتوجرام وإعطاء الأوكسيتوسن بشكل صحيح في حالة ظهور اي خلل في سير عملية الولادة فإن أغلب تلك الحالات ستلد بطريقة طبيعية مع أقل ضرر يقع علي الأم والجنين.