Risk Factors and Pregnancy Outcome of Placenta Previa at Zagazig University Hospitals

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Abstract:

Background: Placenta previa is a major cause of third trimester hemorrhage complicating between 0.3% and 0.5% of pregnancies and accounting for significant maternal and perinatal mortality The ***aims*** of this study was to; determine the risk factors responsible for rising rates of placenta previa and compare pregnancy outcomes between women with placenta previa and those with normal placental situation. A prospective case control ***design*** was selected in carrying out this study and a representative ***sample*** of 200 parturient women (100 with placenta previa being hospitalized or none hospitalized before delivery and 100 with normally situated placenta) were 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 the risk of having placenta previa was significantly increased with increased maternal age, high gravidity, mal-presentation as well as the history of infertility and use of ART, and previous cesarean section (p=0.001). They were less likely to have pre-eclampsia, multiple gestations, exposure to smoking and previous abortion. Anterior localization was more common and complete and incomplete placenta previa constitute three fifth of the cases and there was increased risk of abnormal adherence of the placenta. ***It can be concluded that,*** placenta previa was associated with considerable maternal and fetal morbidity and mortality. ***The study recommended*** that: Early diagnosis of placenta previa, identification of risk factors, adopting recent modalities of diagnoses and management in appropriate setting and with adequate resources may help in better outcome by reducing the feto-maternal complications.

Keywords: Placenta previa, risk factors, outcome

Introduction:

Each year more than 536,000 women die from pregnancy related complications; about 99.0% of these reproductive linked deaths are reported in developing countries, often because women lack access to life-saving care. The WHO's estimation indicated that 25.0% of these deaths are obstetrical hemorrhage related.[(1)]

Placenta previa is implantation of the placenta in the lower uterine segments after 20 weeks of pregnancy. This is associated with potentially catastrophic maternal bleeding and obstruction of the uterine outlet.[(2)] It is associated with high parity, increasing maternal age, uterine abnormalities, smoking, previous placenta previa.[(3)] Furthermore, the independent risk factor for placenta praevia is a previous delivery by caesarean section and the risk increases with the number of caesarean sections performed.[(4)]

Women with placenta previa are at increased risk of preterm labor obstetrical hemorrhage, transfusion, hysterectomy, admission to the intensive care unit, and even maternal

death.[5] Meanwhile, fetal and neonatal complications due to placenta previa may include; preterm birth, low Apgar score, RDS, anemia and neonatal death. [6]

The aforementioned complications can be managed with prior knowledge of the underlying condition, allowing for appropriate resources allocation at time of surgery. This may include provision of blood products, interventional radiology, appropriate surgical and anesthetic cover, as well as intensive care facilities. [7]

Because of speed with which obstetric hemorrhage at delivery can become life threatening the cesarean hysterectomy, internal iliac artery ligation or embolization may be necessary. These procedures require not only the advanced surgical or radiological skills but also the ability and experience to decide quickly when these procedures are necessary to save the maternal life and serious maternal morbidities that may arise from sever blood loss. [8]

Maternity nurses have a responsibility to provide women's holistic health care. Risk assessment and management of placenta previa is a very important aspect of holistic health care, which needs to be promoted. The nurse midwife in particular can play a crucial role as case finder, educator and counselor regarding placenta previa and its management. [9]

Significance of the study:

The Optimal management of late pregnancy bleeding depends on accurate identification of the risk factors, cause and a timely intervention specific to its severity.[9] Unfortunately there is a great scarcity of data about the incidence, risk factors or consequences of placenta previa in Zagazig. So this study was done to look for factors responsible for rising rates of placenta previa and consequent mortality and morbidity. This would enable nursing staff to improve intervention strategies concerned with this high risk cause of blood loss.

Aim of the study:

The aim of the current study was to:

- To determine the risk factors responsible for rising rates of placenta previa.
- To compare pregnancy outcome between women with placenta previa and those with normal placental situation.

Research questions:

- What are the factors responsible for rising rates of placenta previa?
- What is the effect of placenta previa on pregnancy outcomes?

Subjects and Methods:

Research design:

A case-control prospective design was adopted in this study to determine the risk factors responsible for rising rates of placenta previa and compare pregnancy outcomes between women with placenta previa and those with normal placental situation.

Setting:

The present study was conducted in the Maternity Hospitals at Zagazig University.

Subjects:

The study population consisted of all parturient women attending the study setting regardless gravidity, parity or labor condition. A total of 200 parturient women, (100 diagnosed with PP, being hospitalized or non hospitalized before delivery and 100 diagnosed with normally situated placenta) were recruited for this study.

Inclusion criteria:

- Women of age (< 40 years old)

- Diagnosed to have placenta previa by U\S and Doppler.
- On admission to hospital

Exclusion criteria:

- Sever cardio pulmonary diseases
- Uncontrolled DM, liver diseases
- History of coagulation disorders

Sampling technique: A consecutive sampling technique was used; eligible women were recruited in the sample, until the required sample size was fulfilled.

Tools of data collection:

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

I) An interview questionnaire: The questionnaire was designed to collect data from parturient women in both groups regarding to:

- **Personal data:** such as age, education, and occupation.
- **Medical history:** it included data indicating the presence or absence of hypertension, pelvic surgery, previous blood transfusion and use of anti allergic medications.
- **Family history:** it included data indicating the presence or absence of the following conditions: Placenta previa, hypertension, RH incompatibility, multiple pregnancies.
- **Obstetrical history**: such as gravidity, parity, number of previous abortion, spacing between deliveries, types of previous deliveries and history of previous placenta previa if present.

II) Clinical assessment form

- General, local abdominal and vaginal examination; to find out the diagnosis of labor and signs denoting complications such as; maternal vital signs, as well as recording signs of detected complications during the examination.
- **CTG**: for evaluation of the uterine contractions and fetal heart rate.
- **Investigations:** such as Complete blood count (CBC), blood group, Rh compatibility, Prothrombin time (PT), and Partial thromboplastin time (PTT).
- **Ultrasonography**: To evaluate fetal gestational age, placental abnormalities, Amniotic Fluid Index (AFI**)** and Degree of Placenta previa.

III) Partograph: The Partograph was used for women who had normal vaginal delivery or emergency cesarean section to evaluate fetal and maternal condition and to evaluate the labor progress during the active phase of the first stage of labor.

IV) Summary of labor sheet: It included data about the type of cesarean section whether elective or emergency and its indication. It also included data about intra partum complications and immediate postnatal complications such as:

- Presence of postpartum hemorrhage.
- Severity of blood loss
- Administration of IV blood transfusion.
- Hysterectomy.
- The length of hospital stay.

V) Neonatal assessment sheet:

For evaluation of the neonatal condition, the following data was obtained:

- Apgar scores at the first and fifth minute.
- Neonatal complications such as:
  - ✓ Jaundice

- ✓ Respiratory distress syndrome
- ✓ Need for resuscitation
  - ✓ Admission to Neonatal Intensive Care Unit (NICU).
  - ✓ Neonatal death.

***Administrative* and ethical considerations:**

An official permission was granted by submission of an official letter from the Faculty of Nursing to the responsible authorities of the study setting to obtain their permission for data collection.

All ethical issues were taken into consideration during all phases of the study: the research maintained an anonymity and confidentiality of the subjects. The inclusion in the study was totally voluntary. The aim of the study was explained to every woman before participation and an oral consent was obtained after each woman was assured that the study maneuver will cause no actual or potential harm to her or her baby. Also, they were assured that professional help will be provided for her and for her baby whenever needed. Women were notified that they can withdraw at any stage of the research; also they assured that the information obtained during the study will be confidential and used for the research purpose only.

Pilot study:

A pilot study was conducted on 20 parturient women included in total sample size to assess the applicability of the data collection tools arrangements of items, estimate the time needed for each sheet and the feasibility of the study and acceptance to be involved in the study. Any necessary modifications were done.

Field work:

Data collection took a period of eight months- from first of September 2011 to the end of April 2012. After getting the official permission the pilot testing of the study tools was done and analyzed. The researcher started the data collection for 3 days per week in afternoon shift. The researcher interviewed the parturient women and explained the purpose of the study, and obtained their verbal consent.

The researcher started to collect data through three phases:

1. Interviewing Phase:

The researcher attended study setting three days per week for eight months. All women in both groups were interviewed (structured interview). The researcher collected data related to woman's demographic characteristics, obstetric profile, family history for chronic diseases and present medical history.

2. Assessment Phase:

In this phase, immediately after admission to labor and delivery unit, the researcher together with the on-duty physician started regular assessment of the maternal and fetal condition. They measured vital signs, carried out general, local abdominal and pelvic examination. Investigations required were done. Fetal condition was assessed using the Cardio-Toco Graphy (CTG). Care was provided to the woman during this stage and pertinent data was recorded.

Method of estimation of blood loss (Clinical method):

Clinical estimation remains the primary means to diagnose the extent of bleeding and to direct interventional therapy in obstetric practice. The classification of hemorrhage can be based on a graded

physiological response to the loss of circulating blood volume. (10)

Women were either managed actively or expectantly. Those who were suffering from severe hemorrhage were actively managed and delivered by abdominal route. Mild to moderate case of antepartum hemorrhage (APH) were admitted for maternal and fetal surveillance. They were managed expectantly till 38th week. Anemia was corrected; steroids were given when ever indicated. An elective caesarean section was planned at 38 completed weeks. Early intervention was done due to onset of labor pain, more than two episode of vaginal bleeding.

The diagnosis of abnormal placenta adherence was made during pregnancy by Doppler and MRI or at the time of caesarean section, when there was difficult of manual or piecemeal removal of the placenta, if there was no evidence of placental separation 20 minutes after delivery despite active management.

Patients were observed for PPH and Hysterectomy was carried out in severe PPH, due to abnormally adherent placenta. Amount of blood loss, blood transfused, ICU admission, postnatal complications and hospital stay was recorded.

Neonatal assessment was done through measuring the Apgar score and finding of any abnormality that needed admission to neonatal intensive care unit, resuscitation or death, were recorded in the summary of labor and newborn sheets.

Statistical design:

After the 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.

For all statistical tests done, the threshold of significance was fixed at the 5% level (p-value). A p-value > 0.05 indicates non significant result and the p-value < 0.05 indicates a significant results and the p-value is the degree of significance. The smaller the p-value obtained, the more significant is the result, the p-value being the probability of error of the conclusion.

Results:

Table (1): Presents the number and percent distribution of the studied women according to their socio-demographic characteristics. As regards age, it was observed that women who had placenta previa were more likely to be older than 30 years old (45.0%) compared to only less than one fourth (23.0%) of women who had normal placental situation with a mean age of 28.6 ± 5.4 versus 26.1 ± 5.5. Differences observed are statistically significant (t=3.3and 0.001*). Meanwhile, the percentage of women with secondary or university education was higher in the control group (68.0%) compared to patients, but with no statistical significant difference. Concerning women's obstetrical history.

Table (2): describes the type of PP, plan of management and the duration of women hospital stay. Almost three fifths of cases had major PP and conservative management was suitable for more than half (54.0%) of the cases while 46.0% received active management.

Table (3): reveals that,women who had placenta previa were significantly more likely to have preterm delivery and retained placenta (29.0%, 25.0% versus 13.0%, 0.0% respectively. In addition, the majority of patients (84.0%) had caesarean delivery compared to 47.0% in the control

group. The difference observed is statistically significant (P=0.000).

Table (4): reveals the distribution of studied women according to the presence of intra-partum complications. The majority (80.0%) of woman with PP received blood transfusion, had uterine inertia during the third stage of labour (20.0%) and hysterectomy (14.0%) compared to women with normally situated placenta (6.0%, 4.0% and 0.0% respectively). Differences observed are statistically significant.

Table (5): shows the incidence of the immediate postpartum complications among the two groups. Almost one third of patients (31.0%) had postpartum haemorrhage, more than one half (55.0%) of their haemoglobin level was less than 10.5 and 12 cases were admitted to the ICU compared to the control group (6.0%, 21.0% and 1.0% respectively with statistical significant differences). In addition, 2 cases required repeated laparotomy for postoperative hysterectomy.

Table (6): demonstrates significantly better Apgar scores at the first and fifth minutes in the control group (p= 0.000). It is noticed that at the first minute, more than one fourth of the women in PP group had less than 3, compared to 13.0% in the control. At the fifth minute, 64.0% of patients had a score of 7+ compared, to 86.0% in the control. Meanwhile, they were more likely to have low birth weight than the control group (28.0% versus 19.0% respectively).

Table (7): Presents distribution of the studied women according to the incidence of neonatal complications. It is obvious that women in PP group had higher percentage of prematurity (29.0%) and asphyxia (29.0%) compared to almost one tenth (13.0%) of those in women with normal placental situation, with statistical significant difference. Moreover, they were more likely to have a need for resuscitation and NICU admission (29.0%, 22.0% versus 13.0%, 10.0% respectively

It is obvious from **figure (1)**, that more than two thirds (69.0%) of women with PP had caesarean section delivery compared to only 41.0% of the control group. The difference observed is statistically significant ($X^{2=}$ 11.3, P=0.001). It is evident in **figure (2)** that, the majority of cases (80.0%) had bleeding during pregnancy compared to 20.0% asymptomatic.

Discussion:

Worldwide, nearly 600,000 women (15-49 years) die every year as a result of complications arising from pregnancy and childbirth. The risk of a woman dying during such period is about one in six in the poorest parts of the world compared with about one in 30 000 in Northern Europe. Such a discrepancy poses a huge challenge in Egypt for meeting the fifth Millennium Development Goal to reduce maternal mortality by 75% between 1990 and 2015 Sayed et al. [11]

Among the factors that may be associated with placenta previa are the socio- demographic characteristics of the mother such as; age and educational level. In the present study, women who had PP were significantly more likely to be older than 30 years compared with normal placental situation. This finding was consistent with Parijchatt and Tongswatwong [12], Harper et al., [13] who found that significant association between the placenta previa and the advanced maternal age. In addition, Anzacu and Musa [14] in Nigeria reported that the average age of women with placenta previa was 30.2 years and the majority of them were multiparous (63.7%).

Recently, Erez, et al., [15] in Israel reported that women with placenta previa had a higher mean maternal age and grand multiparty rate than those with normally implanted placenta in both pregnancies.

Concerning the level of education and job status the present study revealed that the majority of women in the two groups had secondary school education and were house wives with no statistical significant difference. On the contrary the study of Kiondo, Wandabwa and Doyle[4] in Uganda revealed that, the patients who were employed were associated with twice the risk of PP with severe bleeding, since they spend less time resting which may predispose them to hemorrhage because bed rest is one way of managing placenta previa.

The present study analysis of obstetrical history showed that the frequency of placenta previa increased with the number of gravida but the nulliparaous were less likely to have placenta previa compared to the control group. This finding is in partial agreement with Daood, kazeem and Sepideh [16] in their study in Iran about selected pregnancy variables in women with placenta previa who found that, the frequency of multiparaous women was significantly higher in the group of women with placenta previa ($p<0.001$). While nulliparaous was present in 21.5% of women who had placenta previa compared to 51.0% of normally situated placenta group. Similarly, Parijchatt and Tongswatwong [12] found that women with multigravida had more than 1.62 fold higher risk for placenta previa development without statistical significance.

According to the present study findings, patients who had previous cesarean section were significantly associated with an increased risk of placenta previa. Most studies have reported an association between previous cesarean section and placenta previa [17]. In a Meta analysis of 170,640 pregnant women, a dose related response pattern of risk factors for PP was found with increasing number of cesarean section deliveries. The reason is the damage and scarring of the uterus during cesarean section. This predisposes to low implantation of the placenta. However the damage during lower segment CS is not much and may not be the only explanation. The other explanation is the attraction and adherence of the placenta to CS scar. [4]

As for the mode of delivery, the present result shows that the majority of patients had statistically caesarean delivery ($P=0.000$). This corresponds well with the findings Parijchatt and Tongswatwong [12] whose results showed that all the placenta previa patients were delivered by cesarean section, while only 36.97% in the control group delivered by cesarean section. Moreover, twenty two percent of patients in the present study had morbidity adherent placenta versus none among the control group and the placenta accreta was the most common with highest percentage.

In addition, the present study revealed that the incidence of hysterectomy was significantly higher (14.0%) among women with placenta previa compared to none among the control group ($P = 0.000$). Similarly, Grobman et al [18] reported a similar percent (14.5%) of 868 women with PP who had an obstetric hysterectomy. Recently, Daskalakis et al.,[19] found that obstetric hysterectomy was performed in 19.7% among different types of placenta previa.

According to the present study findings, women in the placenta previa group had significantly higher rates for blood transfusion, postpartum

hemorrhage and admission to the ICU. In addition, 2 cases required repeated laparotomy for postoperative hysterectomy. This corresponds well with the findings Xiaojing et al., [20] whose results showed that 20 cases with PP had postpartum hemorrhage due inadequate occlusion of sinuses in lower uterine segment following the delivery and the lower uterine inertia that attributed to the presence of MAP.

The present study also showed that, in more than one half of the patients their hemoglobin level was less than 10.5. This corresponds well with the findings of Anzacu and Musa [14] who found that over half (51.9%) of patients were anemic. This emphasizes the need for effective blood banking services for the optimal management of pregnancies complicated with placenta previa.

Maternal complications that significantly associated with placenta previa were blood transfusion, postpartum hemorrhage and postpartum hysterectomy [12]. The median days of hospital stay for placenta previa group was significantly higher than the control group (5 days and 3 days, p value <0.0001). Also the study of Bhutia et al.,[21] whose results showed statically difference regarding post partum hemorrhage among the two groups (50.0% vs. 7.8%, p= 0.008). In contrast to the present study findings where less than one third of patients had PPH compared to only 6.0% and the median duration of hospital stay among patients, after delivery was higher than the control group, but with no statistical significant difference.

Concerning fetal outcome, the present study demonstrates significantly lower Apgar scores at the first and fifth minutes in the patients group (p= 0.000). Meanwhile, they were more likely to have low birth weight (28.0% versus 19.0% respectively). This in accordance with Parijchatt and Tongswatwong [12] who have reported that, neonatal complications that significantly associated with placenta previa were preterm, low birth weight and fetal distress (Apgar score at 1 min.≤ 7).

Conclusion:

According to the findings of the present study, it can be concluded that, placenta previa was associated with considerable maternal and fetal morbidity and mortality.

Recommendations:

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

- Early diagnosis of placenta previa, identification of risk factors, adopting recent modalities of diagnoses and management in appropriate setting and with adequate resources may help in better outcome by reducing the feto-maternal complications.
- Efforts should be made to reduce the rates of operative deliveries, because there is a greater likelihood of placenta previa in scarred uterus in a subsequent pregnancy.

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

Socio demographic data	Group				X^2	P
	Cases (pp) (n=100)		Controls (n=100)			
	No	%	No	%		
Age						
▪ <25	26	26.0	43	43.0		
▪ 25-	29	29.0	34	34.0		
▪ 30+	45	45.0	23	23.0	12.9	0.005*
Mean ± SD	28.6 ± 5.4		26.1 ± 5.5		t=3.3	0.001*
Education						
▪ Illiterate / read & write	28	28.0	28	28.0		
▪ Basic	8	8.0	4	4.0	1.5	0.688
▪ Secondary	45	45.0	47	47.0		
▪ University	19	19.0	21	21.0		

** P < 0.05 (significant)*

Table (2): Distribution of study subjects according to their type of placenta previa, plan of management and the duration of their hospital stay (n= 100)

Type of placenta previa and Plan for management	(n=100)	%
Type of placenta previa (n=100):		
▪ Minor	40	40.0
▪ Major	60	60.0
Plan for management (n=100):		
▪ conservative	54	54.0
▪ active	46	46.0
Duration of hospital stay (n=54):		
▪ <1week	7	12.96
▪ 1-	26	48.14
▪ 4-	19	35.18
▪ 8+	2	3.72
Range	2-72	
Mean SD	23.03 ± 4.7	
Median	14.0	

Table (3): Distribution of the studied women according to delivery outcome (n= 200)

Delivery outcome	Group				X^2	P
	Cases (n=100)		Control (n=100)			
	No	%	No	%		
Preterm delivery	**N=100**		**N=100**			
▪ No	71	71.0	87	87.0	4.04	0.041*
▪ Yes	29	29.0	13	13.0		
Mode of delivery	**N=100**		**N=100**			
▪ NVD	16	16.0	53	53.0	30.3	0.000*
▪ C.S	84	84.0	47	47.0		
Type of C.S	**N=84**		**N=47**			
▪ Elective	59	70.2	35	74.5	0.27	0.606
▪ Emergency	25	29.8	12	25.5		

** P < 0.05 (significant)*

Table (4): Distribution of the studied women according to intra partum complications (n=200)

Intra partum complications	Group				X^2	P
	Cases (n=100)		Controls (n=100)			
	No.	%	No.	%		
Intra partum blood transfusion						
▪ No	20	20.0	94	94.0	99.6	0.000*
▪ Yes	80	80.0	6	6.0		
Secondary Uterine inertia						
▪ Yes	20	20.0	4	4.0	20.2	0.001*
▪ No	80	80.0	96	96.0		
Rupture uterus						
▪ No	95	95.0	99	99.0	2.7	0.097
▪ Yes	5	5.0	1	1.0		
Uterine artery injury						
▪ No	98	98.0	100	100.0	FET	0.155
▪ Yes	2	2.0	0	0.0		
UT injury						
▪ No	95	95.0	99	99.0	2.7	0.097
▪ Yes	5	5.0	1	1.0		

FET: Fisher exact test
** P < 0.05 (significant)*

Table (5): Distribution of the studied women according to the occurrence of post partum complications (n=200)

Post partum complications	Group				X^2	P
	Cases (n=100)		Controls (n=100)			
	No.	%	No.	%		
Post partum haemorrhage						
▪ Yes	31	31.0	6	6.0	20.7	0.000*
▪ No	69	69.0	94	94.0		
Anaemia(HB level)						
▪ <10.5	55	55.0	21	21.0	24.5	0.000*
▪ ≥10.5	45	45.0	79	79.0		
Repeated laparotomy for post operative hysterectomy					FET	0.155
▪ No	98	98.0	100	100.0		
▪ Yes	2	2.0	0	0.0		
ICU admission for the mother						
▪ Yes	12	12.0	1	1.0	9.9	0.002*
▪ No	88	88.0	99	99.0		
Duration of ICU stay						
Range	1-30		2-2		Z=0.68	0.494
Mean ± SD	5.0 7.1		2.0 0.0			
Median	3.0		2.0			

FET: Fisher exact test
Z: Mann-Whitney test for two independent groups
** P < 0.05 (significant)*

Table (6): Distribution of the studied women according to Apgar score at the 1st and the 5th minute and birth weight (n=200)

Item	Group				X^2	P
	Cases (n=100)		Controls (n=100)			
	No.	%	No.	%		
Apgar score at 1 minute						
▪ <3	29	29.0	13	13.0		
▪ 4-6	9	9.0	2	2.0	14.1	0.001*
▪ 7+	62	62.0	85	85.0		
Range	2-8		2-8			
Median	7.0		7.0		Z= 6.1	0.000*
Apgar score at 5 minutes						
<3	17	17.0	13	13.0		
4-6	19	19.0	1	1.0	19.9	0.000*
7+	64	64.0	86	86.0		
Range	3-9		3-9			
Median	**8.0**		8.0		Z= 6.2	0.000*
Birth weight						
< 2.5	28	28.0	19	19.0		
2.5-3.5	66	66.0	69	69.0	3.8	0.150
>3.5	6	6.0	12	12.0		
Range	0.75 -5.0		0.80-5.0			
Median	3.0		3.0		Z= 2.1	0.041*

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

Table (7): Distribution of studied women according to neonatal complications

Neonatal complications $	Group				X^2	P
	Cases (n=100)		Controls (n=100)			
	No	%	No	%		
▪ No complications	71	71.0	87	87.0	3.87	0.047*
▪ Prematurity	29	29.0	13	13.0	4.01	0.033*
▪ Jaundice	17	17.0	5	5.0	2.54	0.058
▪ Respiratory distress	29	29.0	13	13.0	3.57	0.049*
▪ Meconium aspiration syndrome	0	0.0	2	2.0	1.1	0.695
▪ Need for resuscitation	29	29.0	13	13.0	2.85	0.074
▪ Admission to NICU	22	22.0	10	10.0	3.1	0.055
▪ Neonatal death	7	7.0	3	3.0	1.5	0.573

$ More than one answer was allowed

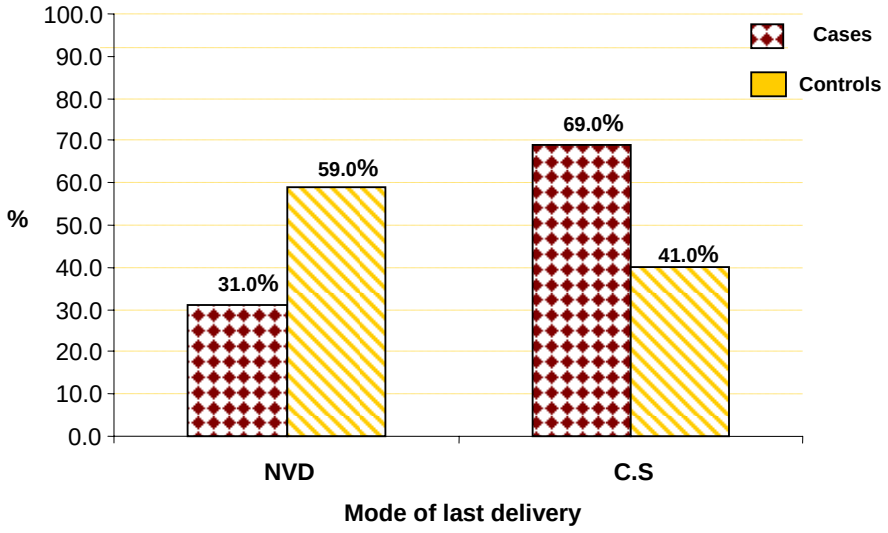

Figure (1): distribution of studied women according to mode of last delivery (n=200)

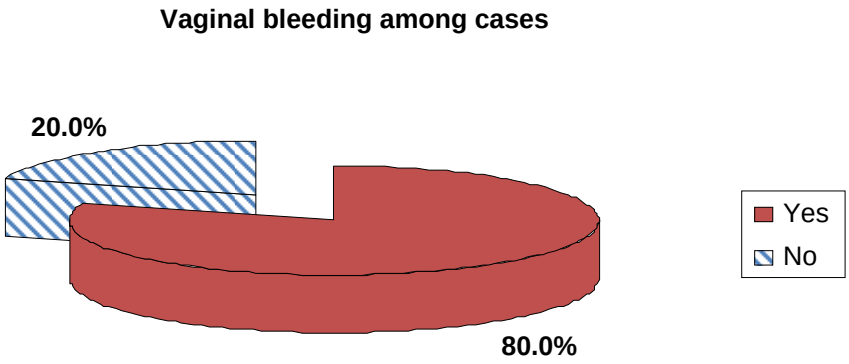

Figure (2): distribution of women with PP according to their vaginal bleeding (n=100)

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عوامل الخطر ونتائج الحمل من المشيمة المتقدمة في مستشفيات جامعة الزقازيق

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مقدمة:

إلى الآن يعد النزيف سواء كان قبل أو بعد الولادة واحد من أهم مسببات الوفاة بين النساء فى فترة الإنجاب في جميع أنحاء العالم. وتعدالمشيمة المتقدمة أحد الأسباب الرئيسية للنزيف فى الثلاثة أشهر الأخيرة من الحمل ويتراوح معدل حدوثها ما بين ٠,٣٪ و ٠,٥٪ من حالات الحمل وتتسبب فى نسبة كبيرة من وفيات الأمهات وحديثي الولادة. وتحدث في حالات الحمل فى جنين واحد بنسبة ١٠٠٠/٢,٨وبنسبة ١٠٠٠/٣,٩فى حمل التوأم. وقد تبين أن الولادة القيصرية السابقة المرتبطة بالمشيمة المتقدمة كمساهم رئيسي نحو استئصال الرحم في الحالات الطارئة وأيضا عامل خطر يهدد الحياة ويؤدى الى النزيف بعد إزالة المشيمة. وفي الوقت نفسه، الولادة المبكرة نتيجة للمشيمة المتقدمة هو أحد أهم أسباب الوفاة في الفترة المحيطة بالولادة. وقد بلغت حالات وفيات الأطفال حديثي الولادة ثلاثة أضعاف زيادة في حالات الحمل المصاحب للمشيمة المتقدمة. ولوحظ وجود اتجاه متزايد نحو المشيمة المتقدمة في العقد الماضي، وذلك يرجع أساسا إلى زيادة الولادات القيصرية والتقدم في سن الأمهات عند الحمل. على الرغم من هذا، لا يزال هناك حاجة الى نتائج أفضل ورعاية كبيرة لتقليل معدلات مرض ووفيات الأمهات وحديثي الولادة.

الهدف من البحث:

أجريت هذه الدراسة لتحديد عوامل الخطر المسؤولة عن ارتفاع معدلات المشيمة المتقدمة والمقارنة بين نتائج الحمل بين النساء اللاتى يعانين من المشيمة المتقدمة وذوي الوضع المشيمي الطبيعي.

عينة البحث:

اشتملت العينة على ٢٠٠سيدة بقسم النساء والتوليد بمستشفيات جامعة الزقازيق. وقد تم تقسيم العينة إلى مجموعتين: المجموعة الأولى وتكونت من١٠٠سيدة لديهن المشيمة المتقدمة والمجموعة الثانية اشتملت على ١٠٠سيدة لديهن المشيمة طبيعية.

وقد استغرقت الدراسة الفترة من بداية سبتمبر ٢٠١١ إلى نهاية أبريل٢٠١٢.

أدوات البحث:

- **استمارة استبيان لتجميع بيانات عن السيدات مثل البيانات الديموجرافية وتاريخ الحمل .**
- **استمارة فحص السيدة عند الدخول:** وتتضمن هذه الاستمارة قياس العلامات الحيوية للسيدة والعمر الجنينى و فحص بالموجات فوق الصوتية والتي تستخدم لمعرفة عمر الجنين ومدى حيويته ووضع الجنين ووضع المشيمة ودرجة المشيمة والمشيمة المتداخلة فى طبقات الرحم.... الخ و كذلك استخدام جهاز مرقاب نبض الجنين الإلكترونى من أجل تقييم معدل ضربات قلب الجنين.
- **البارتوجراف:** تم استخدامه للسيدات اللاتى أجريت لهن ولادة طبيعية لتجميع البيانات الخاصة بحالة الجنين والأم ومدى تقدم الولادة خلال المرحلة الأولى للولادة.
- **ملخص الولادة:** ويحتوى على بيانات خاصة بنوع الولادة والمضاعفات التي حدثت للأم أثناء وبعد الولادة.
- **استمارة تقييم حالة المولود:** و تحتوى على مقياس أبجار في الدقيقتين الأولى والخامسة والمضاعفات التي حدثت للمولود بعد الولادة.

النتائج:

أسفرت نتائج البحث على التالى :

- النساء اللاتي كانت لديهن مشيمة متقدمة كانت أعمارهن أكثر من ٣٠ سنة (٤٥,٠٪) مقارنة مع أقل من ربع (٢٣,٠٪) من النساء اللاتي كانت لديهن المشيمة فى الوضع الطبيعى.
- وترتبط تعدد مرات الحمل، الوضع غير الطبيعى للجنين، وكذلك تاريخ العقم واستخدام التطبيقات الحديثة المساعدة للانجاب بالمشيمة المتقدمة (p = ٠,٠٠٥، ٠,٠٤٣) وفي الوقت نفسه، أكثر من ثلثي (٦٩,٠٪) من النساء مع المشيمة المتقدمة كانت لديهم الولادة القيصرية السابقة مقارنة مع ٤١,٠٪ من مجموعة التحكم، مع فروق ذات دلالة إحصائية (p = ٠,٠٠١).
- من ناحية أخرى أن النساء اللاتى كانت لديهن مشيمة متقدمة كانوا أقل عرضة

للإصابة بتسمم الحمل، حمل التواءم والتعرض للتدخين. وبالإضافة إلى ذلك، كان تاريخ الإجهاض السابقة ليس عامل خطر للمشيمة المتقدمة (٤١,٦٪ مقابل ٤٠,٣٪ في مجموعة التحكم).

- كما ان النساء اللاتى كانت لديهم مشيمة متقدمة كانوا أكثر عرضة للولادة المبكرة، وفقر الدم والغالبية العظمى (٨٤,٠٪) تعرضت للولادة القيصرية مقارنة مع ٤٧,٠٪ في مجموعة التحكم مع فروق دالة إحصائيا (P = ٠,٠٠٠).
- كان الوضع الأمامي للمشيمة أكثر شيوعا من الوضع الخلفي (٤٦,٠٪ مقابل ٤٤,٠٪ في التحكم) ويبدو أنه أكثر خطورة من الوضع الخلفي ويظهر أثره فى زيادة المضاعفات لدى الامهات مثل؛ النزيف المفرط ما قبل الولادة. وبالتالي فقد كانت الغالبية العظمى من حالات المشيمة المتقدمة لديهن النزيف المهبلي بدرجة كبيرة (٩٣,٠٪ مقابل لا شيء في مجموعة التحكم).
- تشكل المشيمة المتقدمة الكاملة والجزئية ٥/٣ من الحالات مما أدى إلى زيادة حالات النزيف المهبلي واللجؤ الى العملية القيصرية مما أدى أيضا إلى زيادة غير طبيعية فى حدوث المشيمة المتداخلة فى طبقات الرحم لدى النساء مع المشيمة المتقدمة وكانت المشيمة المتداخلة فى طبقة الرحم الوسطى الأكثر شيوعا مع أعلى نسبة (١٤,٠٪).
- المشيمة المتقدمة لها آثار ضارة على نتائج الولادة لدى الامهات أكثر من النساء اللاتى لديهن المشيمة فى الوضع الطبيعي. لذا، كانو أكثر عرضة للولادة المبكرة، الولادة القيصرية، المشيمة المتداخلة فى طبقات الرحم، ونزيف ما بعد الولادة، واستئصال الرحم واكثر دخول في وحدة العناية المركزة (٢٩,٠٪، ٨٤,٠٪، ٢٢,٠٪، ٣١,٠٪، ١٤,٠٪ 12.0٪ على التوالي) مقارنة بالنساء ذات الوضع الطبيعي للمشيمة.
- المشيمة المتقدمة لها آثار ضارة على المواليد. حيث أدت إلى انخفاض في درجة أبجار، الحاجة إلى مزيد من الإنعاش، وانخفاض الوزن عند الولادة، وأكثر دخول فى حضانات الاطفال. وبالإضافة إلى ذلك وفيات المواليد (٧,٠٪ مقابل3.0٪ في مجموعة التحكم).

الخلاصة:

وعلى ضوء هذه النتائج فأننا نستخلص من هذا البحث أن خطر حدوث المشيمة المتقدمة يتزايد مع زيادة عمر الأم، تعدد مرات الحمل، الوضع غير الطبيعى للجنين ، وكذلك تاريخ العقم واستخدام التطبيقات الحديثة المساعدة للانجاب ، والعملية القيصرية السابقة (p = ٠,٠٠١). ولكنهم كانوا أقل عرضة للإصابة بتسمم الحمل، حمل التواءم، والتعرض للتدخين والإجهاض السابق. وكان الوضع الأمامي للمشيمة أكثر شيوعا كما تشكل المشيمة المتقدمة الكاملة والجزئية ٥/٣ من الحالات مما أدى إلى زيادة حالات المشيمة المتداخلة فى طبقات الرحم. وبالإضافة إلى ذلك ارتبطت المشيمة المتقدمة بزيادة معدلات مرض ووفيات الأمهات وحديثي الولادة.

التوصيات:

بناءا على اهم النتائج نستخلص التوصيات الاتية:

- التشخيص المبكر للمشيمة المتقدمة ، وتحديد عوامل الخطر، واعتماد طرائق حديثة من التشخيصات والإدارة في الإعداد المناسب والموارد الكافية قد تساعد في تحسين نتائج عن طريق الحد من المضاعفات التى قد تحدث للامهات وحديثى الولادة.
- لابد ان نبذل المزيد من الجهود لتقليل معدلات الولادات القيصرية التى تساهم بنسبة كبيرة فى حدوث المشيمة المتقدمة مع تكرار الحمل.