



RESEARCH ARTICLE

EXAMINES THE OUTCOME OF PREGNANCY IN PREGNANT WOMEN WITH THREATENED ABORTION AND ITS ASSOCIATED FACTOR

*¹Abeergatea and ²Muna R. Hassan

¹MSc Community Health, Ministry of Health, Iraq- Baghdad

²Assistant Instructor, Ministry of Health, Baghdad –Iraq

ARTICLE INFO

Article History:

Received 17th February, 2017
Received in revised form
12th March, 2017
Accepted 20th April, 2017
Published online 31st May, 2017

Key words:

Prevalence, Threatened, Abortion,
Hematoma, Pregnancy, Preterm,
Delivery, Obstetrical, Outcome.

ABSTRACT

Objectives: To study the prevalence of threaten abortion in 1st trimester among pregnant women and to find out any association which has been found between the socio demographic characteristic and obstetrical outcomes.

Methodology: A Prospective cross sectional study has been conducted in Fatima Al-Zahra hospital in Baghdad among 409 pregnant women attending to emergency and outpatient clinics during the period from first April 2015 to twenty third February 2016. Data collection was by using a previously designed questionnaire history. A blood sample has been obtained to estimate the complete blood cell count, Rh identification, and quantitative bhCG.

Results: Most cases still in the age group 21-30 years was 202 (49.4%). Preterm delivery 113(27.6%), 50.6% of hematoma with the size less than 4cm² only 0.5% of case had history of therapeutic abortion. 11.5% of cases had smoker. All pregnant women was suffering from diabetes mellitus, hypertension, epilepsy, anemia, psychological, hormonal imbalance, 27.1%, 19.1%, 1.7%, 82.9%,3.2%, 30.1% respectively. Significant associations have been found between the age groups, occupation, family history and obstetrical outcomes (P<0.0001).

Conclusions: Threatened abortion occurs often and is a serious emotional burden for women. Bleeding in the first half of the pregnancy with or without presence of hematoma may be associated with poor pregnancy outcome. Bed rest, uterine sedatives and hormonal treatment given can bring better prognostic outcome. Investigations that determine the diagnostic and prognostic parameters are of value.

Recommendation: Further large prospective studies are needed to find the best predictors for the better outcome.

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Citation: Dr. Abeergatea and Muna R. Hassan. 2017. "Examines the Outcome of Pregnancy in Pregnant Women with Threatened Abortion and its Associated Factor", *International Journal of Current Research*, 9, (05), 51276-51279.

INTRODUCTION

Threatened Abortion is the most common complication in the first half of pregnancy (Cunningham *et al.*, 2001). Its incidence varies between 20-25%. The main reasons for vaginal bleeding in early pregnancy are subchorionic haemorrhage, subchorionic haematoma and rupture of a marginal placental sinus (Weiss *et al.*, 2004). Majority of threatened abortion cases was bleeding which unknown origin and usually slight. Symptoms and signs of threatened abortion are so variable that the outcome of the pregnancy cannot be reliably predicted by clinical features at presentation (Ben-Haroush *et al.*, 2003). Thus various biochemical and biophysical tests have been applied extensively in attempts to improve the accuracy of predicting the outcome of these pregnancies (Giobbe *et al.*, 2011).

Threatened abortions have been shown to be associated with increased incidence of ante partum haemorrhage, preterm labor and intra uterine growth retardation (Youssef and Al-Eissa, 2003). Aims was studied the prevalence of threaten abortion in 1st trimester among pregnant women and to find out any association which has been found between the socio demographic characteristic and obstetrical outcomes.

MATERIALS AND METHODS

This study was prospective cross sectional study has been conducted in Fatima Al-Zahra Hospital with the period from 1 April 2015 to 23 February 2016. Data was collected from each pregnant women attending emergency and outpatient's clinic according to special questionnaire was prepared in advance. The sample size was four hundred and nine of pregnant women for all types. Ethical approval was got from Iraqi Ministry Of Health, Al-Rusafa Directorate before to start this study .and,

*Corresponding author: Dr. Abeergatea,
MSc Community Health, Ministry of Health. Iraq- Baghdad.

ethical content approval from each participants also be collected it. All patients presenting with complaint of vaginal bleeding and who had a viable fetus on ultrasound scan in the first trimester were eligible to participate in the study. After obtaining the history and reviewing the systems, a physical examination should be completed, including vital signs, deep palpation of the abdomen for tenderness, and a speculum examination. Visualization of the cervix and vagina is conducted to identify trauma or abnormalities, such as polyps, and allow sampling of the cervix for cultures as appropriate. Lastly, a bimanual examination is performed to appreciate the size and shape of the uterus, consistency and dilatation of the cervix, cervical motion tenderness, and to note any abnormalities in the adnexa. A laboratory evaluation should be completed, including a complete blood cell count with differential, blood typing with Rh identification, quantitative bhCG, and infection screening if indicated. In addition, an examination of thyroid- Stimulating hormone and progesterone levels may be ordered as indicated. The current availability of ultrasound, especially transvaginal imaging, has aided in the evaluation of the woman presenting with first-trimester vaginal bleeding. A questionnaire was completed for each pregnant women including basic socio demographic and reproductive data, age, occupation , education , family size, family history, vaccination against rubella, take contraceptive pill before pregnancy , History of therapeutic abortion, X-rays exposure, smoking habits, alcohol habits , Drug ingestion, Abnormal structural anatomy , bleeding duration (days), bed rest, chronic disease (diabetes mellitus, hypertension, epilepsy, anemia, Psychological disease, Hormonal imbalance). The statistical analysis was performed by using the statistical package for the social science version 13(SPSS In, Chicago, IL, USA) (Spinthall, 2000).

RESULTS

Out of forty hundred and nine cases pregnant women was included in this study. Of this highest frequency was 202(49.4%) still in the age group (21-30) years, followed by 134(32.8%) in the age group 31-40 years, and lowest frequency was 73(17.8%) in the age group <20 years old. Of this majority of pregnant women 270(66%) were housewives and 102(24.9%) were employer (Table 1).

Table 1. Characteristics of pregnant women with threaten abortion

Variables	Frequency	Percentage
Age		
≤20	73	17.8
21-30	202	49.4
31-40	134	32.8
Occupation		
Employer	102	24.9
House wife	270	66
Student	37	9.1
Education level		
Illiterate	49	12
Read and write	57	13.9
Primary	106	25.9
Intermediate	71	17.4
Secondary	82	20
University and higher	44	10.8

Regard as education level, the highest frequency of pregnant women were primary education level 106(25.9%), followed by 82(20%) were secondary education level, 71(17.4%) were intermediate education level and the lowest frequency

44(10.8%) were university and higher education level. According to gestational age, There are 217(53.1%) of pregnant who had spontaneous aborted, followed by 113(27.6%) with preterm delivery and 79(19.3%) with term delivery. Also, the size of sub chorionic hematoma, we shows the 50.6% with less than 4cm², followed by 36.7% in the size 4-20cm². Then 276(67.5%) had family history of threaten abortion while 133(32.5%) had not (Table 2)

Table 2. Distribution of pregnant women according to gestational age and size of hematoma

Gestational age /weeks	Frequency	Percentage
<12	143	35
13-16	99	24.2
17-20	167	40.8
Obstetrical outcomes		
Term delivery	79	19.3
Preterm delivery	113	27.6
Spontaneous delivery	217	53.1
Size of sub chorionic hematoma		
<4 cm ²	207	50.6
4-20cm ²	150	36.7
>20cm ²	52	12.7
Family history		
Yes	276	67.5
No	133	32.5

Concerning to vaccination against rubella, of this the majority of pregnant women 378(92.4%) had inoculated against rubella only 31(7.6%) had not. As well, of this 187(45.7%) of pregnant was used the pill before pregnancy while 222(54.3%) are not. Only 2(0.5%) of pregnant women had history of therapeutic abortion but 407(99.5%) are not. Also 17(4.2%) of pregnant women was exposed to x-rays but 392(95.8%) are not. 12(2.9%) of pregnant was drink alcohol while 397(97.1%) was not. furthermore in this table 47(11.5%) of pregnant were smoking while 362(88.5%) were not. 47(11.5) were drug ingestion while 362(88.5%) were not (Table 2). Regarding the abnormal structural anatomy, 21 (5.1%) of pregnant women had abnormal structural anatomy while 388(94.9%) are not. 237(57.9%) of pregnant were need to take rest and 172(42.1%) was not (Table 3).

Table 3. Distribution of studied sample according to variable characteristics

Variables	Yes		No	
	frequency	percent	frequency	percent
Vaccination against rubella	378	92.4	31	7.6
Take contraceptive pill before pregnancy	187	45.7	222	54.3
History of therapeutic abortion	2	0.5	407	99.5
X-rays exposure	17	4.2	392	95.8
Alcohol habits	12	2.9	397	97.1
Smoking habits	47	11.5	362	88.5
Drug ingestion	78	19.1	331	80.9
Abnormal structural anatomy	21	5.1	388	94.9
Bed rest	237	57.9	172	42.1

As for the chronic disease, all the pregnant women had suffered from diabetes mellitus, hypertension, epilepsy, anemia, psychological, hormonal imbalance, 27.1%, 19.1%, 1.7%, 82.9%,3.2%, 30.1% respectively(Table 4). Regarding to this table was presented that in the age group (21-30) years old, 131(60.4%) of cases had spontaneous delivery, followed by 52(46.0%) had preterm delivery and 19(24.1%) had term delivery.

Table 4. Distribution of studied sample according to chronic diseases

Chronic disease	Yes	%	No	%
Diabetes	111	27.1	298	72.9
Hypertension	78	19.1	331	80.9
Epilepsy	7	1.7	402	98.3
Anemia	339	82.9	70	17.1
Psychological disease	13	3.2	396	96.8
Hormonal imbalance	123	30.1	286	69.9

Table 5. Distribution of studied sample according to demographic characteristic and obstetrical outcomes

Age groups (Years)	obstetrical outcomes						Total	p. value	
	Term delivery		Preterm delivery		Spontaneous delivery				
	frequency	percent	frequency	percent	F frequency	percent	F frequency	% percent	
<12	21	26.5	33	29.2	19	8.7	17.8	73	$X^2=46.5$
21-30	19	24.1	52	46.0	131	60.4	49.4	202	$P<0.0001$
31-40	39	49.4	28	24.8	67	30.9	32.8	134	high
Total	79	100	113	100	217	100	409	100	significant
Occupation									
Employer	41	51.9	33	29.2	28	12.9	24.9	102	$X^2=54.3$
House wife	31	39.2	66	58.4	173	79.7	66	270	$P<0.0001$
Student	7	8.9	14	12.4	16	7.4	9.1	37	high
Total	79	100	113	100	217	100	409	100	significant
Education level									
Illiterate	4	5.1	15	13.3	30	13.8	12	49	$X^2=14.5$
Read & write	16	20.3	11	9.8	30	13.8	13.9	57	$P=0.06$
Primary	23	29.1	17	15.0	66	30.4	25.9	106	not
Intermediate	15	18.9	20	17.7	36	16.6	17.4	71	significant
Secondary	10	12.7	26	23.0	46	21.2	20	82	
University & higher	11	13.9	24	21.2	9	4.2	10.8	44	
Total	79	100	113	100	217	100	409	100	
Family history									
Yes	39	49.4	72	63.7	165	76.0	67.5	276	$X^2=19.7$
No	40	50.6	41	36.3	52	24.0	32.5	133	$P<0.0001$
Total	79	100	113	100	217	100	409	100	high
									significant

Table 6. Distribution of studied sample according to gestation age and obstetrical outcomes

Gestation age/week	obstetrical outcomes						Total	p. value	
	Term delivery		Preterm delivery		Spontaneous delivery				
	Ffrequency	percent	F	%	F	%	F	%	
<12	24	30.4	44	38.9	75	34.6	143	35	$X^2=15.8$
13-16	32	40.5	21	18.6	46	21.2	99	24.2	$P=0.004$
17-20	23	29.1	48	42.5	96	44.2	167	40.8	significant
Total	79	100	113	100	217	100	409	100	

In the age groups 31-40 years old, 67(30.9%) of cases had spontaneous, followed by 39(49.4%) had term delivery and 28(24.8%) had preterm delivery. In the age groups <20, 33(29.2%) of cases had spontaneous delivery and 21(26.5%) of cases had term delivery. Significant associations have been found between the age groups and obstetrical outcomes ($P<0.0001$) (Table 5). Regarding occupation, in employed group, 41(51.9%) of cases had term, followed by 33(29.2%) of cases had preterm & 28(12.9%) of cases had spontaneous delivery, while in housewives group, 173(79.7%) of cases had spontaneous, followed by 66(58.4%) of cases had preterm and 31(39.3%) had term delivery. Significant associations have been found between the occupation and obstetrical outcomes ($P<0.0001$) (Table 5). In the primary education 66(30.4%) of cases had spontaneous delivery, followed by 23(29.1%) of cases had term delivery and 17(15.0%) of cases had preterm. In the secondary education, 46(21.2%) of cases had spontaneous delivery, followed by 26(23%) had preterm and 10(12.7%) of cases had term delivery. In read education 30(13.8%) of cases had spontaneous followed by 16(20.3%) of cases had term delivery and 11(9.8%) of cases had preterm delivery. Not significant associations have been found between the education levels and obstetrical outcomes ($P=0.06$)(Table 4).In family history, 165(76%) of cases had spontaneous delivery, 72(63.7%) of cases had preterm and 39(49.4%) of cases had

term delivery. While in cases of not family history 52(24%) of cases had spontaneous, followed by 41(36.3%) of cases had preterm and 40(50.6%) of cases had term delivery. Significant associations have been found between the family history and obstetrical outcomes ($P<0.0001$) (Table 5). Significant relationship have been found between the gestation age and obstetrical outcomes $p=0.004$ (Table6).

DISCUSSION

Threatened miscarriage is one of the most common complications of pregnancy which affects 16-25% of all pregnancies. In this present study, 49.4% of cases with threatened abortion were in the age groups 21-30years old. Lowers results found in American by Juliano, 28.6%, the reason is due to the fact that more girls married with small-age and do not know what is pregnancy (Juliano *et al.*, 2008). Also 66% of pregnant women were housewives, lower results found in Iran by Davari, 31.7%, The reason goes back to the status of the country where the country a state of war and in stability, which leads to security stay at home (Davari-Tanha *et al.*, 2008). In this study 25.9% of pregnant were primary education level, similar results found in Saudi by Youssef, 24.9%, this similarity due to the similarity between the two habits and more girls prefer to stay at home and helper family,

leading to not complete the study (Youssef, 2005). 67.5% of cases with family history of threatened abortion, other results found in Malaysia by Hanita, 44.1% This is refers to the mothers' lack of awareness about the seriousness of abortion and its complications, whether physical or psychological effects (Hanita *et al.*, 2012). In this study 54.3% of pregnant were take pill before pregnancy, other results found in Nugegoda, 11.9%, this indicated to differences of awareness and education about use of contraceptive (Bimsara H Perera *et al.*, 2011). Only 0.5% of pregnant with history of therapeutic abortion, other results found in china by Zhu, 6.5% , this findings to lack of knowledge about of risk taking medication and its impact on the fetus during the first period of pregnancy (Zhu *et al.*, 2010). 11.5% of pregnant were smoking, other results were found in UK by Johns, 65.7%, refer to different habits and life style between the two countries (Johns *et al.*, 2006). In the present study 55.5% of pregnant were bleeding duration more than 10 days, this results is lower than found in Saudi by Youssef, 39.9%, this may be due to lack of knowledge and lack of interest about bleeding dangers (Youssef, 2005). Diabetes, anemia and hypertension of the most common diseases in the country, 27.1% of pregnant women were suffer from diabetes, other results found in Saudi by Youssef , 11.9% and 82.9% of pregnant were suffer from anemia , other results found in Iran by Davari, 22.7%.

Indicated to similar habits and customs between the countries (Davari-Tanha *et al.*, 2008; Youssef, 2005). Women with threatened miscarriage in the first trimester are at increased risk of premature delivery, and this risk factor should be taken into consideration when deciding upon antenatal surveillance and management of their pregnancies. Also in the present study 40.8% of cases were gestation age 17-20 weeks but lower results were found by Dongol in Nepal, 17.1% and 53.1% of pregnant were spontaneous aborted but lower results were found in Nepal 11.4%, this differences may be due to lack of knowledge and Not to see a doctor in the event of bleeding and the possibility of using alternative means to reduce the bleeding at home ⁽¹⁴⁾. Ultra son graphically proven sub chorionic hematoma has been associated with threatened abortion. The incidence of sub chorionic hematoma is 50.6% is seen of less than 4cm² size. Threatened abortion occurs often and is a serious emotional burden for women. Bleeding in the first half of the pregnancy with or without presence of hematoma may be associated with poor pregnancy outcome. Bed rest, uterine sedatives and hormonal treatment given can bring better prognostic outcome. Investigations that determine the diagnostic and prognostic parameters are of value. Further large prospective studies are needed to find the best predictors for better outcome.

Conflict of interest: None declared.

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