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A Biological and Physiological Study of Females Who Underwent Abortion in Thi -Qar Governorate

Rand Ali Zeyad

University of Thi- Qar / College of Medicine –Department of Medical Physiology / Iraq

E-mail; **rand-a@utq.edu.iq**

Abstract: Currently, one of the biggest health issues facing pregnant women is abortion. There are a plethora of reasons why abortion occur, but few women are aware of them, particularly since the chromosomes of the fetus, which carry its genetic makeup, may be faulty. The Thi- Qar governorate served as the study's site comprising 200 blood samples drawn 60 blood samples for pregnant women, and 140 blood samples drawn from women who had abortions and were between the ages of 18 and 42. Was used device complete blood count (CBC) the reaction tests blood example WBC, RBC PLT and PCV. Also use kite test blood groups and SPSS version 26 were used to statistically analyze all of the study's data.

Keywords : First Abortion, Spontaneous Abortion, RBCs , WBCs , PCV , Hb

Introduction: Abortion; is incomplete pregnancy and losing during the first trimester of pregnancy of the fetus (Ebdi *et al*., 2011). Abortion is classified into primary and secondary types. The primary abortion means several consecutive abortion occurred and the secondary type begin from successive abortion after a successful pregnancy (Nielsen, 2011). Causes of recurrent abortion are connected to genetic components, skeletal anomalies, infections, and endocrine disorders (Abdi-Shayan *et al*., 2016). Abortion caused by the following factors. First, is that insufficient nutrition provide by the mother leads to ar-resting of fetal development. Second, is that pregnant women's abdomen is squeezed and collided, which results in abnormal fetal position or unhealthy fetal development (Vesentini *et al.*, 2018). The causes of the majority of recurrent abortion cases are unknown and may be related to autoimmunity (Lee *et al*., 2011). .

It has mostly been noted as a significant postpartum lactation stimulant (Freeman *et al*., 2000). Thyroid Stimulating Hormone impairs female reproduction by causing irregular menstruation, abortion, and premature labor, which reduces the likelihood of ovulation in females (Krassas *et al.,) 2010*)

Regarding immunological aspects, the allogeneic antibodies produced as a result of female blood group incompatibility Sometimes, there are compelling reasons for a person to regularly abort their fetus (Guillaume and Rossier, (2018).

Human sex is the result of a complex process that involves gonadal, hormonal, and genetic reactions in utero; also, sex proof There are more psychological and phenotypic postnatal elements at play Prenatal sex-specific interactions between the mother, placenta, and fetus affect the mother's health and well-being following delivery in addition to the fetal's intrauterine life

and the pregnant mother's health There may be significant variations in obstetrical outcomes and between male and female fetus pregnancies due to the hormonal component of the fetus. (Al-Qaraghouli and Fang, 2017) Sex and the fetus's risk of prenatal outcomes have been related. Male pregnancies have long been associated with an increased risk of various adverse outcomes, including preterm birth, early rupture of membranes, umbilical cord prolapses, real umbilical cord knots, inability to progress through the first and second phases of labor, uncomfortable fetal heart rate patterns, cesarean delivery, and lower Apgar scores (Poon *et al*., 2018).

Goal of the research

1- Conducting some physiological analysis for aborted women, such as RBCs, WBCs, PCV, PLT and Hb

2-Calculate the abortion rate in relation to the months of pregnancy

3- Find out the woman's blood groupings the abortion

4- Knowing the abortion rate in the district and areas of Nasiriya

Classification of abortion

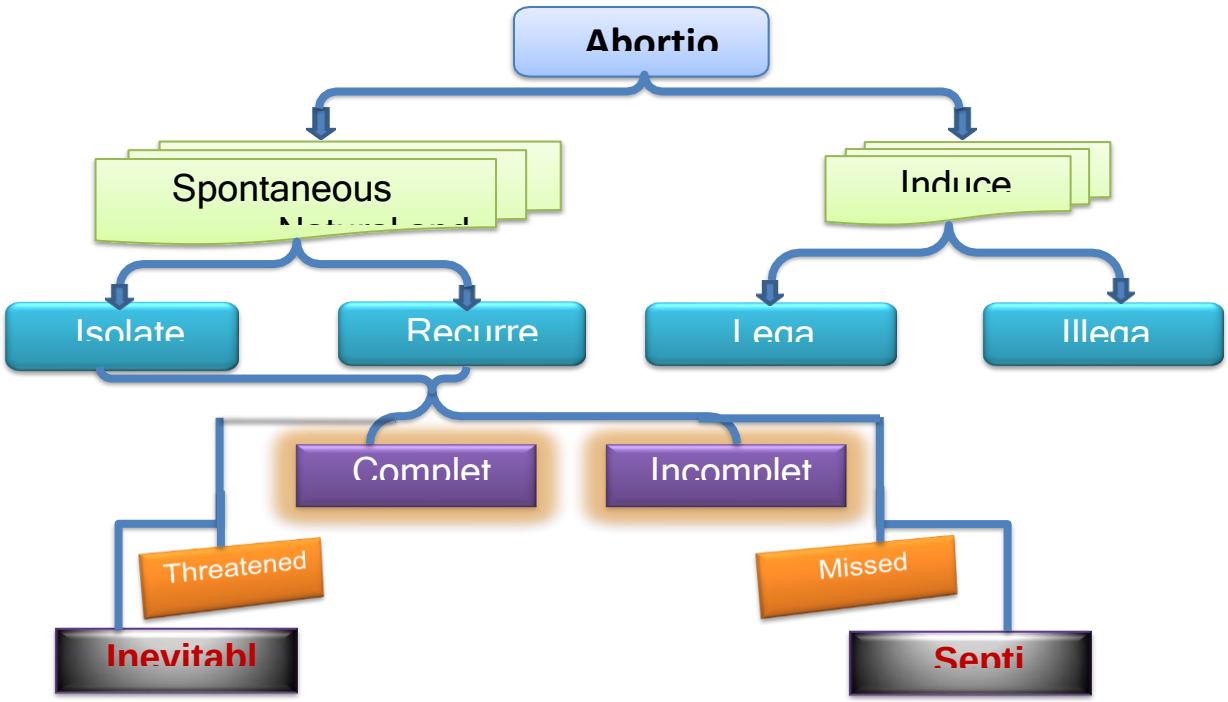

Figure (1)

Classification of abortion according to (Das, 2004)

1-Spontaneous abortion

Another term for spontaneous abortions is miscarriage. This is the word used to describe a pregnancy ending that happens naturally without the need for medical or other intervention.

According to (Ishii *et al*., 2014), this kind of abortion occasionally occurs even before the woman becomes aware that she is pregnant, and she might not even be aware that she has aborted. Ten percent or so of pregnancies terminate spontaneously, while a far higher percentage of pregnancies result in an induced abortion (Sarno *et al.*, 2019).

2-Natural Spontaneous Abortion (NSA)

He abortion that results from natural causes such as the mother's illness, a localized illness or sickness of the generative organs, shock, fear, or overindulgence in joy is known as a natural spontaneous abortion. Most naturally occurring abortions take place in the second and third months of pregnancy. Women cannot control or decide on this kind of abortion. Therefore, no moral agent bears accountability for that. Since this kind of abortion is not voluntary, ethics primarily addresses voluntary behaviors, so ethics is unaffected by this type of abortion Women cannot control or decide on this kind of abortion. Therefore, no moral agent bears accountability for that. Since this kind of abortion is not voluntary, ethics primarily addresses voluntary behaviors, so ethics is unaffected by this type of abortion (Ishii *et al*., 2014).

Accidental Spontaneous Abortion (ASA)- 3

Accidental spontaneous abortions can also result from medication toxicity, arsenic poisoning, accidental (non-intentional) poisoning, or even vegetable poisoning. Alternatively, due to an unintentional fall that dislodges the implanted ovum, accidental spontaneous abortion is likewise not addressed in ethics because it does not rely on a person's choice and is therefore neither morally right nor wrong (Ayed *et al.*, 2017).

There are two categories of spontaneous abortion, both unintentional and natural :

1-An isolated abortion is a spontaneous abortion that happens during a single phase, as the term suggests.

2-According to, recurrent abortion is commonly described as a series of three or more consecutive spontaneous abortions (DelFabro *et al.*, 2011).

4-Induced Abortion

The intentional ending of a pregnancy before the embryo or baby is ready to support its own life is known as an induced abortion An induced or elective abortion, as opposed to a spontaneous one, is a decision to end a pregnancy using medical means (Fragkos *et al*., 2018). The intentional killing of the conceived child while it is still inside the womb is referred to as a "induced abortion" (Stavrou *et al*., 2018)

5-The Etiology of Abortion

Many individuals may have many causes for this type of abortion (RSM); in fact, two to three distinct causes have been observed in a single patient (Tang, 2014). Finding the causes of RSM in patients who come to the clinics for inquiry is still quite difficult, especially when 40–60% of patients have no known etiology (Yin *et al*., 2013)

Materials And Methods

The purpose of the study was to determine the frequency and kind of abortions among females in Thi- Qar Province, as well as to investigate some physiological aspects Were taken blood females aborted 5 ml of blood and pregnant 5 ml of venous blood moved to tubes Contains EDTA for device complete blood count (CBC) measurement. Also 2 ml to know the blood types of aborted females Also used Statistical analysis excel for Windows 2010 and SPSS software version 24 (Chi-Square for independent at P. value ≤0.05) were used to analyze all of the study's data

The Results

1.1. Distribution of abortion females and control group according to Thi-Qar Province

The result of the current study indicated that there were the highest status of abortion in Nasiriya district with percentage 35.7% from all females under the study. Followed by Al-Batha district with percentage 10 %, Said-duqail with percentage10% Al-Batha and Said-duqail with equall in percentage were 10% Souq-alshiouq Al- with percentage 9.2%, Al-shatra district with percentage 9.2% and the lowest abortion status in Al-Cheapish with percentage no case The result also showed that a significantly statistical difference

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Table (1): Distribution of abortion females and control group according to Thi-Qar Province

Females Location	Patients		Control		Total	
	No	%	No	%	No	%
Nasiriya	50.0	35.7	19.0	31.6	69	34.5
Al-Batha	14. 0	10	10.0	16.6	24.0	12
Said-Duqail	14.0	10	2.00	3.33	16.0	8
Souq-Alshiouq	13.0	9.2	1.00	1.6	14.0	7
Al-Shatra	13. 0	9.2	3.00	5	16. 0	8
Al-Cheapish	0.00	0.00	5.00	8.3	5.00	2.5
Al-Islah	12.0	8.57	7.00	11.6	19.0	9.5
Al-Rifai	14.0	10	8.00	13.3	22.0	11
Al-Fohood	10.00	7.14	5.00	8.3	15.0	7.5
Total	140	100	60	100	200	100
$Calx^2 = 26.007$	$Tabx^2 = 17.31$		DF= 9		P. Value = 0.004	

1.2. Prevalence of Abortion Type According to Month of Abortion

The results of the current study appeared highest cases on abortion in the first trimester The highest incidence of miscarriage was in the second month with percentage 25.5% , While the last three months lowest incidence of abortion The lowest cases were miscarriages in the sixth and ninth months percentage 0.00% no cases abortion The number of spontaneous abortion was less than the first abortion the result also showed that a significantly statistical difference

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Table (2): Type of abortion prevalence by months of abortion

Abortion Type Trimester	First Abortion		ontaneous Abortion		Total	
	No	%	No	%	No	%
Month 1	12.0	13.3	9.00	12.8	21.0	13
2Month	23.0	25.5	16.0	22.8	39.0	24.3
3Month	22.0	24.4	19.0	27	41.0	25.6
Month 4	10.0	11.11	12.00	17	22.0	13.7
5Month	10. 0	11.11	4.00	5.7	14.00	8.7
6Month	0.00	0.00	2.00	2.8	2.00	1.2
7Month	8.00	8.8	6.00	8.5	14.00	8.7
8Month	5.00	2.5	2.00	2.8	7.00	4.3
9Month	0.00	0.00	0.00	0.00	0.00	0.0 0
Total	90.0	10.0	70.0	38.5	160	100
$Calx^2 = 14.178$	$Tabx^2 = 17.31$		Df= 9		P. Value= 0.198	

1.3. Type Physiological examination of abortion females and control group according to Thi- Qar Province

Current study's results are illustrated by a rise in the highest PLT abortion females less than 25 years old comparison whit pregnant females who are less than 25 years old. Additionally, tests reveal that RBCs low abortion the females comparison whit pregnant females ,while WBCs abortion females highest comparisons pregnant females lowest of all ages, respectively, and that PCV and Hb abortion females are lowest a comparisons pregnant females highest among females of all ages. The results also demonstrate a statistically significant difference

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Table (3): Type Physiological examination of abortion females and control group according to Thi-Qar Province

Females Age Groups	PLT 10 Mm3	Rbcs 10^6mm3	Wbcs 10^3 Mm	PCV %	Hb G/Dl
Patient Below 25 Years	387.95 ±13.5	5.40 ±0.13	12.42 ±0.65	24.19 ±0.77	11.88 ±0.15
Control Below25 Years	216.65 ±22.97	6.36 ±0.18	10.31 ±0.36	37.06 ±1.20	13.30 ±0.21
Patient Above 25 Years	190.35 ± 18	4.55 ±0.02	14.72 ±0.59	36.79 ±0.62	10.23 ±0.26
Control Above25 Years	169.57 ±15.28	7.02 ±0.10	11.75 ±0.61	42.32 ±0.97	12.64 ±0.30
L.S.D	28.17	0.82	2.27	4.19	0.91

1.4. Distribution of Abortion females According to type blood group Groups

The results Current study's results the present study reveals the lowest rate of abortion with blood group O (13.6%) and AB (16.4%), whereas the prevalence is highest in patients with blood group B (29.2%) and A (40.8%).

Table (4): Distribution of Abortion females According to type blood Groups

Blood Group	Patients	%
A	57	40.8
B	41	29.2
AB	23	16.4
O	19	13.6
Total	140	100

Discussion: Recurrent abortion appears to be a unique clinical entity from occasional miscarriages, as evidenced by the fact that the documented frequency of recurrent abortion is significantly greater than would be predicted by chance alone. Additionally, the discovery that recurrent abortion appears to be a unique clinical entity from occasional miscarriages, as evidenced by the fact that the documented frequency of recurrent abortion is significantly greater than would be predicted by chance alone. Additionally, the discovery that recurrent.

Contrary to random miscarriages, abortion is more likely to occur when the fetus has a normal chromosomal makeup. The body of knowledge regarding the genetics of illness etiology has grown significantly in recent years. However, the investigation into the genetic origins of female

infertility and recurrent abortion has advanced far more slowly. In about 50% of instances, the reason of miscarriage is still unknown despite numerous investigations being done to determine the underlying mechanisms (Kaare, 2009; Del Fabro *et al.*, 2011).

The current study's findings conflicted with those of a study conducted in Diyala by (Darweesh et al., 2018) the age group of less than 25 years had the lowest number of abortion cases, while the age group of 25 to 35 years had the highest number of abortion cases. Based on the kind of abortion, both studies indicated that the majority of abortions were first-time abortions

The current study found no significant association between the WBCs in each of the females' pregnant groups, but there was a difference in the RBCs between the abortion pregnant groups and the other groups, and this result was significant when compared to the other groups. Females who had abortions differed from other groups in PCV, and they significantly differed from other groups in PLT. Numerous studies have shown how important hematocrit level is as a predictor of illness risk or as a measure for evaluating the severity of a disease.

Conclusion

1-Most abortions occurred in the second and third month of pregnancy for both types of abortion, while the lowest were in the sixth and ninth month.

2- The highest cases of abortion were in the center of Thi-Qar Governorate, while the lowest cases of abortion were in the Al-fohood

Women under the age of 25 years were most likely to undergo both types of abortions

3- Most abortion were for women with type A blood.

4- Conclusions of the current study reveals some differences in the physiological exams of aborted women compared to a control group of pregnant women.

Recommendations

1-The necessity of treating cases where spontaneous abortion occurs, and knowing its cause and treating it.

2-It is necessary to refrain from marriage at an early age because it has a negative impact on a safe pregnancy.

3-It is necessary to stay away from sources of infection, especially women who deal with and husbandry animals.

4-We recommend researchers to a genetic study on the occurrence of spontaneous abortion in Thi-Qar province

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