The Egyptian Journal of Hospital Medicine (April 2025) Vol. 99, Page 2310-2318

The Prevalence of Fetal Losses at Mansoura University Hospitals (Observational, Cross-Sectional Study)

Nada Mohammed Moustafa Albasuony, Khaled Samir Ismail, Maged Ragheb Elshamy, Osama Mahmoud Warda, Shimaa Zakaria
Department of Obstetrics and Gynecology, Faculty of Medicine, Mansoura University
Corresponding author: Nada Mohammed Moustafa Albasuony, **Email:** nadabasuony0@gmail.com, **Mobile :**01062036181

ABSTRACT

Background: A pregnancy loss (PL) is devastating for the parents, and knowledge of why the foetus died can be useful in several ways. It may help the parents to cope with the loss of their expected child, let them and the clinicians know whether or not they could have done anything to avoid the foetal demise.

Objectives: To determine the prevalence of pregnancy loss after 12 weeks of gestation at Mansoura university hospitals.

Patients and methods: The study was conducted at the Department of Obstetrics and Gynecology, Mansoura University Hospitals, Mansoura, Egypt, within a period from January 2022 to December 2022. This study included all gravid women who had lost their pregnancy after 12 weeks of gestation and who were presented to Mansoura University Hospitals.

Results: The prevalence of pregnancy loss among females beyond 12 weeks' gestation was 4.8%. The prevalence of associated comorbidities was 7.5%, 17.4%, 3.3%, 3.6%, 3%, 0.9%, 0.9%, and 1.8% for DM, HTN, thyroid disease, asthma, cardiac disease, SLE, APS, and thrombophilia, respectively.

Conclusion: The current study concluded that pregnancy loss after the first trimester although not common, but it stills represent a major burden on the healthcare system. Some factors were shown to be associated with abortion including older age, multiple pregnancies, multiple deliveries, previous NVD, previous Cs, previous pregnancy loss, SLE, APS, thrombophilia and previous evacuation of abortion. Some factors were shown to be associated with intrauterine fetal death including longer duration of pregnancy, multiple pregnancies, DM and HTN.

Keywords: Fetal loss, still birth, >12wk of gestational age.

INTRODUCTION

Pregnancy loss (PL) is the spontaneous end of a pregnancy resulting in demise at any point from implantation through delivery [1]. PL is defined as either a loss before 20 or 24 weeks of gestation (according to the 1st day of the last menstrual period) or the loss of an embryo or fetus less than 400 grams in weight if the gestation age isn't identified [2].

Recurrent pregnancy loss (RPL) is defined as either the demise of two or more or three or more pregnancies before the foetus reaches viability [3].

"Fetal loss," or "stillbirth," can be used when the pregnancy loss happens after 22 weeks of gestation [4]. Stillbirth indicates a fetus born after 20 completed weeks of pregnancy without spontaneous breath or heartbeat [5].

Developing nations have higher stillbirth rates, up to 97%, than developed nations [6]. Stillbirth has multifactorial causes. Early recognition of predisposing factors for stillbirth and proper antenatal management could decrease preventable of stillbirths and enhance the general outcomes of pregnancy. The main cause of preterm stillbirth was intrauterine growth restriction/placental insufficiency (23.5%), while infection (26.3%) represented most term stillbirths [7].

The cause is thought to be foetal chromosomal abnormalities, including trisomies, monosomy, and polyploidy. In addition, inflammatory and immunologic dysregulation is thought to have a role in certain patients, likely due to the effect on trophoblastic invasion [8].

The importance of progesterone in early pregnancy and the likelihood that progesterone deficiency may cause PL have long been hypothesized. As a result, exogenous progestogen has been broadly used to try to counter the deficiency that may be accompanied by infertility and PL [9]. The most frequent predisposing factor for early PL is advanced maternal age [10].

The current work is conducted to determine the prevalence of pregnancy loss after 12 weeks of gestation at Mansoura university hospitals such as (abortion, intrauterine fetal deaths, stillbirth), evaluate related risk factors and to understand the etiology of pregnancy loss, let the physicians identify whether or not they could have done anything to avoid the foetal demise, and help the family and clinicians take precautions before and during consequent pregnancies.

PATIENTS AND METHODS

Study design

This is an observational cross-sectional study conducted at Department of Obstetrics and Gynecology, Mansoura University Hospitals, Mansoura, Egypt. The study was conducted for a duration of one year from January 2022- December 2022.

Eligibility Criteria

This study included all gravid women who have lost their pregnancy after 12 weeks of gestation who were presented to Mansoura university hospitals (cases admitted from Emergency Unit and Outpatient Clinic).

Received: 06/01/2025
Accepted: 06/03/2025

Patients who refused participate in the study, Patients who lost their pregnancy <12 weeks, or patients with incomplete data or lost follow up were excluded from the study.

METHODS

All cases were subjected to the full history taking, including age, special habits, menstrual history (state of menopause, age of menarche, cycle length and regularity), obstetric history (gravidity, parity, abortion, and pregnancy complications), past history of surgical procedures, family history, and past history of medical disease.

Clinical examination included general examination; anthropometric measurements included BMI; abdominal examination to evaluate for any sign of pregnancy, presence of scars, and ensure that the uterine fundus is no more than the upper border of symphysis pubis; and vaginal examination (cervical assessment includes dilatation and position). Obstetric ultrasound was done to document the presence of missed abortion or any type of abortion, to ensure the gestational age, and to exclude cases with any of the exclusion criteria. Laboratory investigations upon initial admission were conducted and included routine laboratory investigations (complete blood count, liver and kidney functions, and bleeding profile). Study outcomes (fate of current pregnancy) were assessed.

Ethical consideration

The whole study design was approved by the Institutional Review Board code number (MS.22.09.2142), Faculty of Medicine, Mansoura University. Written informed consent was obtained from all the cases included in the study. Confidentiality and personal privacy were respected in all levels of the study. Throughout its implementation, the study complied with the Helsinki Declaration.

Statistical analysis

Data analysis was performed by SPSS software, version 26 (SPSS Inc., PASW statistics for windows version 26. Chicago: SPSS Inc.). Qualitative data were described using number and percent. Quantitative data were described using median (minimum and maximum) for non-normally distributed data and mean± Standard deviation for normally distributed data after testing normality using Kolmogorov-Smirnov test. Significance of the obtained results was judged at the (0.05) level. Chi-Square test was used to compare qualitative data between groups as appropriate Mann Whitney U test was used to compare between 2 studied groups for non-normally distributed data. Student t test was used to compare 2 independent groups for normally distributed data.

RESULTS

Among 7000 females presented to Obstetrics and Gynecology Mansoura University Hospitals during the study period, the number of fetal losses beyond 12 weeks of gestation was 333 females with prevalence rate 4.8%.

As shown in table **1**, in the females with fetal loss, the mean age was 28.65±6.21 years with range between 16 and 45 years. The mean body BMI was 39.06±8.57 kg/m². There were 80 females (24%) and 106 (31.8%) who hadn't given rise to offsprings. Previous vaginal deliveries were reported in 86 females (25.8%), previous CS was reported in 163 females (48.9%), previous abortion in 127 females (38.1%), multiple pregnancy in 41 females (12.3%). The pregnancy duration ranged from 12 to 41 weeks.

Table (1): Demographic characters and obstetric history among studied cases

	N =333	%
Age/ years (M±SD) Range	28.65±6.21 (16-45)	
BMI (M±SD) Range	39.06±8.57 (28-35)	
Gravidity Primi Multi	 80 252	 24.0 76.0
Parity No offspring Have offspring	 106 227	 31.8 68.2
Prevaginal deliveries No Yes	 247 86	 74.2 25.8
Prev CS No Yes	 170 163	 51.1 48.9
Prev miscarriage No Yes	 206 127	 61.9 38.1
Multiple pregnancy No Yes	 292 41	 87.7 12.3
Pregnancy duration (M±SD weeks) Range	24.63±7.67 (12-41)	

Table **2** shows that 2nd trimester loss was reported in 195 females (58.6%) and 3rd trimester loss was reported in 138 females (41.4%).

Table (2): Loss time among studied cases

	N =333	**%**
Loss time **2nd trimester loss** **3rd trimester loss**	 **195** **138**	 **58.6** **41.4**

Use of ART was reported in 13 females (3.9%), congenital anomalies were reported in 47 females

(14.1%), previous pregnancy loss in 136 females (40.8%) as shown in table 3.

Table (3): Risk factors and previous pregnancy loss among studied cases.

		N =333	%
ART	No	320	96.1
	Yes	13	3.9
Congenital anomalies	No	286	85.9
	Yes	47	14.1
Previous pregnancy loss	No	197	59.2
	Yes	136	40.8

ART: Assisted reproductive technology

Regarding the associated comorbidities, DM was reported was reported in 25 females (7.5%), HTN was reported was reported in 58 females (17.4%), thyroid disease was reported was reported in 11 females (3.3%), asthma was reported was reported in 12 females (3.6%), cardiac disease was reported was reported in 10 females (3%), SLE was reported was reported in 3 females (0.9%), APS was reported was reported in 3 females (0.9%), thrombophilia was reported in 6 females (1.8%) as shown in table 4.

Table (4): Medical history and associated diseases among studied cases.

	N =333	%
DM		
No	307	92.5
Yes	25	7.5
Hypertension		
No	275	82.6
Yes	58	17.4
Thyroid disease		
No	322	96.7
Yes	11	3.3
Asthma		
No	321	96.4
Yes	12	3.6
Cardiac		
No	323	97.0
Yes	10	3.0
SLE		
No	330	99.1
Yes	3	0.9
APS		
No	330	99.1
Yes	3	0.9
Thrombophilia		
No	327	98.2
Yes	6	1.8

SLE: systemic lupus erythematosus, APS: Antiphospholipid Syndrome

As shown in this table, previous evacuation was reported in 52 females (15.6%). The number of previous evacuations ranged between 1 to 10. Previous hysterotomy was reported n 2 females (0.6%). Positive consanguinity was reported in 5 females (1.5%) as shown in table 5.

Table (5): Past history among studied cases

	N =333	%
Previous evacuation		
No	281	84.4
Yes	52	15.6
Number of previous evacuation	1(1-10)	
Previous hysterotomy		
-ve	331	99.4
+ve	2	0.6
Consanguinity		
-ve	328	98.5
+ve	5	1.5

-ve: Negative, +v: positive

Regarding the fate of the current pregnancy, aborted spontaneous was done in 154 females (46.2%), VD with or without evacuation in 52 females (15.6%), CS in 71 females (21.3%) and hysterotomy in 56 females (16.8%) as shown in table 6.

Table (6): Fate of current pregnancy

	N =333	**%**
Fate of current pregnancy		
Aborted spontaneous	154	46.2
VD (with or without evacuation)	52	15.6
Cs	71	21.3
Hysterotomy	56	16.8

VD: Vaginal delivery CS: Cesarean section

There was insignificant difference between the females with second trimester and third trimester pregnancy loss regarding the demographic data and obstetric history as shown in table 7.

Table (7): Relation between loss time and demographic, obstetric history among studied cases.

	Loss time		Test of significance
	Second trimester N=195	Third trimester N=138	
Age/ years	28.53±5.93	28.83±6.59	t=0.444 p=0.657
BMI	39.89±9.44	37.95±7.34	t=0.798 p=0.429
Gravidity Primi Multi	 46(23.6) 149(76.4)	 34(24.6) 104(75.4)	 χ2=0.049 P=0.825
Parity No offspring Have offspring	 60(30.8) 135(69.2)	 46(33.3) 92(66.7)	 χ2=0.245 P=0.621
Prev Vaginal deliveries No Yes	 145(74.4) 50(25.6)	 102(73.9) 36(26.1)	 χ2=0.008 P=0.927
Prev Cs No Yes	 97(49.7) 98(50.3)	 73(52.9) 65(47.1)	 χ2=0.322 P=0.570
Prior Abortion No Yes	 121(62.1) 74(37.9)	 85(61.6) 53(38.4)	 χ2=0.007 P=0.933
Pregnancy duration (weeks)	19.13±3.86	32.39±4.22	t=29.65 P=0.001*
Multiple pregnancy in current pregnancy No Yes	 173(88.7) 22(11.3)	 119(86.2) 19(13.8)	 χ2=0.463 P=0.496
ART No Yes	 188(96.4) 7(3.6)	 132(95.7) 6(4.3)	 χ2=0.124 P=0.725
Congenital anomalies No Yes	 162(83.1) 33(16.9)	 124(89.9) 14(10.1)	 χ2=3.06 P=0.08
Previous pregnancy loss No Yes	 114(58.5) 81(41.5)	 83(60.1) 55(39.9)	 χ2=0.095 P=0.758

χ2: Chi-Square test, t: Student t test, *statistically significant ART: Assisted reproductive technology, BMI: Body mass index Cs: Cesarean section.

Table 8 shows that the prevalence of hypertension was statistically significantly higher in the group with third trimester pregnancy loss. There was insignificant difference between the second and third trimester pregnancy loss regarding the other associated comorbidities.

Table (8): Relation between loss time and medical history among studied cases.

	Loss time		Test of significance
	Second trimester N=195	Third trimester N=138	
DM			
No	184(94.8)	123(89.1)	$\chi2$=3.78
Yes	10(5.2)	15(10.9)	P=0.052
Hypertension			
No	175(89.7)	100(72.5)	$\chi2$=16.77
Yes	20(10.3)	38(27.5)	P=0.001*
Thyroid disease			
No	189(96.9)	133(96.4)	$\chi2$=0.075
Yes	6(3.1)	5(3.6)	P=0.783
Asthma			
No	185(94.9)	136(98.6)	$\chi2$=3.15
Yes	10(5.1)	2(1.4)	P=0.076
Cardiac			
No	190(97.4)	133(96.4)	$\chi2$=0.311
Yes	5(2.6)	5(3.6)	P=0.577
SLE			
No	194(99.5)	136(98.6)	$\chi2$=0.794
Yes	1(0.5)	2(1.4)	P=0.373
APS			
No	192(98.5)	138(100)	$\chi2$=2.14
Yes	3(1.5)	0	P=0.143
Thrombophilia			
No	191(97.9)	136(98.6)	$\chi2$=0.166
Yes	4(2.1)	2(1.4)	P=0.684

$\chi2$: Chi-Square test, *statistically significant SLE: systemic lupus erythematosus, APS: Antiphospholipid Syndrome

Table 9 shows that there was insignificant difference between the second and third trimester pregnancy loss regarding the past history, consanguinity.

Table (9): Relation between loss time and past history, consanguinity among studied cases.

	Loss time		**Test of significance**
	Second trimester N=195	**Third trimester N=138**	
Previous evacuation			
No	**166(85.1)**	**115(83.3)**	**$\chi2$=0.198**
Yes	**29(14.9)**	**23(16.7)**	**P=0.657**
Number of previous evacuations Median (range)	**1(1-10)**	**1(1-3)**	**Z=1.54 P=0.123**
Consanguinity			
-ve	**190(97.4)**	**138(100)**	**$\chi2$=3.59**
+ve	**5(2.6)**	**0**	**P=0.058**

$\chi2$: Chi-Square test, Z: Mann Whitney U test, *statistically significant -ve: Negative, +v: positive

Table 10 shows that there was a statistically significant difference between the second and third trimester pregnancy loss regarding the fate of the current pregnancy and the gender of the current pregnancy. In the second trimester pregnancy loss, 71.3% had aborted through vagina and 21.5% required hysterotomy. While in the third trimester pregnancy loss, CS was performed in 47.8% and VD was required in 31.9%.

Table (10): Relation between loss time and fate of current pregnancy among studied cases.

	Loss time		**Test of significance**
	Second trimester N=195	**Third trimester N=138**	
Fate of current pregnancy			
Aborted spontaneous	**140(71.8)**	**14(10.1)**	**χ2=190.27**
VD (with or without evacuation)	**8(4.1)**	**44(31.9)**	**P=0.001***
CS	**5(2.6)**	**66(47.8)**	
Hysterotomy	**42(21.5)**	**14(10.1)**	

VD: Vaginal delivery, Cs: Cesarean section χ2: Chi-Square test, *statistically significant

Table 11 shows that mean age was statistically significantly higher in the females who had abortion. The presence of multigravida and having previous off springs were statistically significantly higher in the group with abortion. Also, previous NVD, previous CS and previous pregnancy loss were statistically significantly higher in the group with abortion. On the other hand, the use of ART was statistically significantly higher in the group with no abortion.

Table (11): Relation between abortion and demographic, obstetric history among studied cases.

	Abortion		Test of significance
	No N=206	Yes N=127	
Age/ years	28.03±6.34	29.65±5.88	t=2.32 p=0.02*
BMI	30±8.45	37.18±8.76	t=1.11 p=0.272
Gravidity			
Primi	80(38.8)	0	χ2=64.92
Multi	126(61.2)	127(100)	P=0.001*
Parity			
No offspring	80(38.8)	26(20.5)	χ2=12.21
Have offspring	126(61.2)	101(79.5)	P=0.001*
Prevaginal deliveries			
No	163(79.1)	84(66.1)	χ2=6.92
Yes	43(20.9)	43(33.9)	P=0.009*
Prev Cs			
No	115(55.8)	55(43.3)	χ2=4.92
Yes	91(44.2)	72(56.7)	P=0.026`*
Pregnancy duration (weeks)	24.56±7.64	24.73±7.76	t=0.195 p=0.845
Multiple pregnancy in current pregnancy			
No	176(85.4)	116(91.3)	χ2=2.54
Yes	30(14.6)	11(8.7)	P=0.111
ART in current pregnancy			
No	194(94.2)	126(99.2)	χ2=5.32
Yes	12(5.8)	1(0.8)	P=0.021*
Congenital anomalies in current pregnancy			
No	176(85.4)	110(86.6)	χ2=0.09
Yes	30(14.6)	17(13.4)	P=.764
Previous pregnancy loss			
No	196(95.1)	1(0.8)	χ2=289.51
Yes	10(4.9)	126(99.2)	P=0.001*

χ2: Chi-Square test, t: Student t test, *statistically significant, ART: Assisted reproductive technology

Table 12 shows that there was insignificant difference between the females with and without abortion regarding the associated comorbidities except for SLE, APS and thrombophilia that were statistically significantly higher in the group with abortion.

Table (12): Relation between abortion and medical history among studied cases.

	Abortion		Test of significance
	No N=206	Yes N=127	
DM No Yes	 193(94.1) 12(5.9)	 114(89.8) 13(10.2)	 $\chi2$=2.16 P=0.141
Hypertension No Yes	 174(84.5) 32(15.5)	 101(79.5) 26(20.5)	 $\chi2$= 1.33 P=0.248
Thyroid disease No Yes	 199(96.6) 7(3.4)	 123(96.9) 4(3.1)	 $\chi2$=0.015 P=0.902
Asthma No Yes	 196(95.1) 10(4.9)	 125(98.4) 2(1.6)	 $\chi2$=2.43 P=0.119
Cardiac No Yes	 202(98.1) 4(1.9)	 121(95.3) 6(4.7)	 $\chi2$=2.09 P=0.148
SLE No Yes	 206(100) 0	 124(97.6) 3(2.4)	 $\chi2$=4.91 P=0.027*
APS No Yes	 206(100) 0	 124(97.6) 3(2.4)	 $\chi2$=4.91 P=0.027*
Thrombophilia No Yes	 205(99.5) 1(0.5)	 122(96.1) 5(3.9)	 $\chi2$=5.29 P=0.024*

$\chi2$: Chi-Square test *statistically significant DM: Diabetes mellitus, SLE: systemic lupus erythematosus, APS: Antiphospholipid Syndrome

Table 13 shows that the history of previous evacuation was significantly higher in the females with abortion. However, there was insignificant difference between the females with and without abortion regarding the pregnancy evacuation or previous hysterotomy, positive consanguinity.

Table (13): Relation between abortion and past history, consanguinity and positive laboratory findings among studied cases.

	Abortion		Test of significance
	No N=206	Yes N=127	
Previous evacuation No Yes	 206(100) 0	 75(59.1) 52(40.9)	 $\chi2$=99.95 P=0.001*
Previous hysterotomy -ve +ve	 205(99.5) 1(0.5)	 126(99.2) 1(0.8)	 $\chi2$=0.120 P=0.729
Consanguinity -ve +ve	 204(99) 2(1)	 124(97.6) 3(2.4)	 $\chi2$=1.03 P=0.311

$\chi2$: Chi-Square test, *statistically significant, -ve: Negative, +v: positive

DISCUSSION

The current work was conducted to determine the prevalence of pregnancy loss after 12 weeks of gestation at Mansoura university hospitals such as (abortion, intrauterine fetal deaths, stillbirth), evaluate related risk factors and to understand the etiology of pregnancy loss, let the physicians know whether or not they could have done anything to avoid the foetal demise, and help the family and physicians take precautions before and during consequent pregnancies.

The current study was conducted on 7000 females presented to Obstetrics and Gynecology, Mansoura University Hospitals (outpatient clinic and emergency unit) during the current study period, the number of cases who lost their pregnancy beyond 12 weeks was 333 females with prevalence 4.8%. Second trimester loss was reported in 195 females (58.6%) and 3rd trimester loss was reported in 138 females (41.4%). The prevalence of hypertension was significantly higher in the group with 3rd trimester pregnancy loss. In the second trimester pregnancy loss, 71.3% had aborted through vagina and 21.5% required hysterotomy. In the third trimester pregnancy loss, CS was performed in 47.8% and VD was required in 31.9%.

This came in accordance with a large study that analyzed the data of 217,484 females. They reported total of 10,121 miscarriages. Among currently married females, 82% of miscarriages happened within the initial 12 weeks, whereas 20.3% of miscarriages among unmarried females happened after the 1st trimester (> 12 weeks) **[11].**

In this study, the prevalence of hypertension was significantly higher in the group with 3rd trimester pregnancy loss. This is because there is a peak in cardiac output in the early 3rd trimester and blood pressure (BP) begins to increase back to basal levels **[12].** So, the maximum effect of chronic hypertension is manifested during the third trimester.

In this study, the mean age was significantly higher in the females who had abortion. In the current study, the presence of multigravida and having previous off springs were significantly higher in the group with abortion. Some studies have demonstrated a higher risk of abortion with increasing gravidity **[13, 14]**, others haven't **[15, 16]**. Potential explanations for an association include compensatory reproductive behavior (pregnancy failure is likely to be accompanied by recurrent trials at conception, resulting in higher gravidity) and short interpregnancy intervals in multigravida females.

In this study, the prevalence of SLE and thrombophilia was statistically significantly higher in the group with abortion. In the context of thrombophilic disorders in pregnancy loss another study showed that a non-recurrent pregnancy loss following 20 to 24 weeks' gestation is accompanied by factor V Leiden, protein S deficiency, and the prothrombin *G20210A* mutation **[17]**.

In the current study, the use of ART was significantly higher in the group with no abortion. This agreed with **Lidegaard *et al.*** **[18]** who compared the pregnancy losses among females who had conceived following assisted reproductive techniques were compared with losses in pregnancies naturally conceived or established by insemination. There results showed that there in females above 40 years, the rate of pregnancy losses was significantly diminished in assisted pregnancies compared to spontaneous pregnancies**.**

In the current study, the prevalence of APS was significantly higher in the group with abortion. This agreed with **Yang and Liang (2021)** **[19]** who showed that three or more spontaneous miscarriages and double-positivity for antiphospholipid antibodies are risk factors for abortion in women with APS. Also, **Xu *et al.*** **[20]** reported that APS increases the risks of negative maternal and foetal outcomes during pregnancy. Three or more spontaneous miscarriages and double-positivity for antiphospholipid antibodies are predisposing factors for adverse pregnancy outcomes in women with APS**.**

In this study, the presence of previous NVD and previous Cs were significantly higher in the group with abortion. This agreed with **Jiang *et al.*** **[21]** who showed that history of cesarean section was related to abortion.

In the current study, the pregnancy duration was significantly longer in the group with IUFD. Also, the previous multiple pregnancies were significantly higher in the group with no IUFD. This came in accordance with **Ahmed *et al.*** **[22]** who sowed that there was a significant relation between IUFD and multiple gravidity, previous abortion, previous IUFD.

In this study, the prevalence of DM and HTN were significantly higher in the group with IUFD. They indicated a significant relationship were high BP. This agreed with **Ahmed *et al.*** **[22]** who showed that there was a significant relationship between IUFD and diabetes mellitus (DM) and chronic hypertension. Likewise, an analytical study of IUFD conducted by **Noor *et al.*** **[23]** displayed that the most identifiable maternal risk factors of IUFD were severe preeclampsia (20%), anaemia (16%), fever (6.2%), gestational DM (5.3%).

STRENGTH OF STUDY

Study done was conducted on large number of cases.

LIMITATION OF STUDY

The current study has some limitations as the small sample size and being a single center study.

CONCLUSION

The current study concluded that pregnancy loss after the first trimester although not common, but it stills represent a major burden on the healthcare system. Some factors were shown to be associated with abortion including older age, multiple pregnancies, multiple deliveries, previous NVD, previous Cs, previous pregnancy loss, SLE, APS, thrombophilia and previous evacuation of abortion. Some factors were shown to be associated with intrauterine fetal death including longer duration of pregnancy, multiple pregnancies, DM and HTN.

Conflict of interest: None.
Fund: None.

REFERENCES

1. **Wang X, Chen C, Wang L *et al.* (2003):** Conception, early pregnancy loss, and time to clinical pregnancy: a population-based prospective study. Fertility and sterility, 79(3): 577-84.
2. **Cuenca D (2023):** Pregnancy loss: Consequences for mental health. *Frontiers in global women's health*, 3: 1032212.
3. **He L, Wang T, Xu H *et al.* (2019):** Prevalence of depression and anxiety in women with recurrent pregnancy loss and the associated risk factors. Archives of gynecology and obstetrics, 300: 1061-6.
4. **Bailey S, Boivin J, Cheong Y *et al.* (2020):** Effective support following recurrent pregnancy loss: a randomized controlled feasibility and acceptability study. Reproductive BioMedicine Online, 40(5): 729-42.
5. **Shaaban L, Alsaleh R, Alwafi B *et al.* (2006):** Associated risk factors with ante-partum intra-uterine fetal death. *Saudi medical journal*, 27(1): 76.
6. **McNamee K, Dawood F, Farquharson R (2014):** Mid-trimester pregnancy loss. *Obstetrics and Gynecology Clinics*, 41(1): 87-102.
7. **Southcombe J, Mounce G, McGee K *et al.* (2017):** An altered endometrial CD8 tissue resident memory T cell population in recurrent miscarriage. Sci Rep, 7(1): 41335.
8. **Neill S (2023):** Management of early pregnancy loss. Jama, 329(16): 1399-400.
9. **Tetruashvili N, Domar A, Bashiri A (2023):** Prevention of pregnancy loss: combining progestogen treatment and psychological support. Journal of clinical medicine, 12(5): 1827.
10. **Jackson T, Watkins E (2021):** Early pregnancy loss. Jaapa, 34(3): 22-7.
11. **Das M, Patidar H, Singh M (2024):** Understanding trimester-specific miscarriage risk in Indian women: insights from the calendar data of National Family Health Survey (NFHS-5) 2019-21. BMC Women's Health, 24(1): 63.
12. **Khedagi A, Bello N (2021):** Hypertensive disorders of pregnancy. Cardiology clinics, 39(1): 77-90.
13. **Jivraj S, Makris M, Saravelos S *et al.* (2009):** Pregnancy outcome in women with factor V Leiden and recurrent miscarriage. *BJOG:* An International Journal of Obstetrics & Gynaecology, 116(7): 995-8.
14. **Metwally M, Ong K, Ledger W *et al.* (2008):** Does high body mass index increase the risk of miscarriage after spontaneous and assisted conception? A meta-analysis of the evidence. Fertility and sterility, 90(3): 714-26.
15. **Østensen M, Lockshin M, Doria A *et al.* (2008):** Update on safety during pregnancy of biological agents and some immunosuppressive anti-rheumatic drugs. Rheumatology, 47(3): iii28-iii31.
16. **Nawaz FH, Khalid R, Naru T *et al.* (2008):** Does continuous use of metformin throughout pregnancy improve pregnancy outcomes in women with polycystic ovarian syndrome? Journal of Obstetrics and Gynaecology Research, 34(5): 832-7.
17. **Rey E, Kahn SR, David M *et al.* (2003):** Thrombophilic disorders and fetal loss: a meta-analysis. The Lancet, 361(9361): 901-8.
18. **Lidegaard Ø, Mikkelsen A, Egerup P *et al.* (2020):** Pregnancy loss: A 40-year nationwide assessment. Acta Obstetricia et Gynecologica Scandinavica, 99(11): 1492-6.
19. **Yang J, Liang M (2021):** Risk factors for pregnancy morbidity in women with antiphospholipid syndrome. Journal of Reproductive Immunology, 145: 103315.
20. **Xu J, Chen D, Duan X *et al.* (2019):** The association between antiphospholipid antibodies and late fetal loss: A systematic review and meta-analysis. Acta obstetricia et gynecologica Scandinavica, 98(12): 1523-33.
21. **Jiang W, Yang X, Luo J (2022):** Risk factors for missed abortion: retrospective analysis of a single institution's experience. Reproductive Biology and Endocrinology, 20(1): 115.
22. **Ahmed ES, Elsayed Y, Abd Elhalim A *et al.* (2022):** Prevalence and associated risk factors of intrauterine fetal deaths among pregnant women at El-Manial University Hospital. Egyptian Nursing Journal, 19(1): 18-25.
23. **Noor N, Parveen S, Madan I *et al.* (2020):** Analytical study of intrauterine fetal death and associated maternal conditions at a tertiary centre. Parity, 1(G2): G3.