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## THE IMPACT OF ABORTIONS ON THE HEALTH OF THE MULTIPAROUS PREGNANT WOMEN WITH IRON DEFICIENCY ANEMIA

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Among the multiparous women, abortions were quite common and were accompanied by complications in the clinic during the subsequent pregnancy. The research aimed at the analysis of the course of pregnancy and childbirth in multiparous women with iron-deficiency anemia with a history of induced and spontaneous abortion. The course of pregnancy and childbirth was investigated in 80 pregnant women with iron deficiency anemia, aged 28-36. The research was conducted on women of reproductive age including 25 multiparous women without a history of abortion and 55 multiparous women with history of abortion. The obtained results were analyzed by discriminant and variance analysis methods. The risk of miscarriage was in 24.0% of women without a history of abortion, and in 54.5% of women with a history of abortion ( $P_{\chi^2}=0.011$ ;  $P_U=0.011$ ), and early leaking of amniotic fluid was in 44.0% of women without a history of abortion, and in 54.5% of women with a history of abortion ( $P_{\chi^2}=0.382$ ;  $P_U=0.385$ ). The risk of miscarriage was found in 7 (30.4%) multiparous women with mild anemia without a history of abortion, and 16 (69.6%) multiparous women with a history of abortion; in 17 multiparous women with moderate anemia without a history of abortion (31.5%), and 37 (68.5%) multiparous women with a history of abortion; 1 multiparous woman with severe anemia without a history of abortion (33.3%), and in 2 (66.7%) multiparous women with a history of abortion  $P_{\chi^2}=0.993$ . The number of abortions in the anamnesis of multiparous women with IDA is high. Carrying out propaganda and promotion work in women's counseling centers can prevent both unintended pregnancies and complications of pregnancy and childbirth.

**Key words:** iron deficiency anemia, pregnancy, multiparous women, abortion, miscarriage

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## ВПЛИВ ПЕРЕРИВАННЯ ВАГІТНОСТІ НА ЗДОРОВ'Я ПОВТОРНОВАГІТНИХ ЖІНОК ІЗ ЗАЛІЗОДЕФІЦІТНОЮ АНЕМІЄЮ

Серед повторнонагітних жінок аборти є досить частим явищем та супроводжуються ускладненнями у клініці при наступній вагітності. Метою дослідження був аналіз перебігу вагітності та пологів у повторнонагітних жінок із залізодефіцитною анемією, які мають в анамнезі штучні та мимовільні аборти. Досліджено перебіг вагітності та пологів у 80 вагітних із залізодефіцитною анемією у віці 28–36 років. До дослідження було залучено жінок репродуктивного віку, у тому числі 25 повторнонагітних жінок без абортів в анамнезі та 55 повторнонагітних жінок з абортами в анамнезі. Отримані результати аналізували методами дискримінантного та дисперсійного аналізу. Ризик невиношування був у 24,0 % жінок без абортів в анамнезі та у 54,5 % жінок з абортами в анамнезі ( $P_{\chi^2}=0,011$ ;  $P_U=0,011$ ), а раннє підтікання навколоплідних вод було у 44,0 % жінок без абортів в анамнезі і у 54,5 % жінок з абортами в анамнезі ( $P_2=0,382$ ;  $P_U=0,385$ ). Ризик невиношування вагітності виявлено у 7 (30,4 %) повторнонагітних жінок, з анемією легкого ступеня без абортів в анамнезі і у 16 (69,6 %) жінок з абортами в анамнезі; у 17 повторнонагітних жінок з анемією середнього ступеня тяжкості без абортів в анамнезі (31,5 %) та у 37 (68,5 %) жінок з абортами в анамнезі; у 1 повторнонагітної жінки з вираженою анемією без абортів в анамнезі (33,3 %) і у 2 (66,7 %) повторнонагітних жінок з абортами в анамнезі  $P_2=0,993$ . Отже, кількість абортів в анамнезі у повторнородящих жінок із залізодефіцитною анемією є досить великою. Проведення агітаційно-пропагандистської роботи у жіночих консультаціях дозволяє попередити як небажану вагітність, так і ускладнення вагітності та пологів.

**Ключові слова:** залізодефіцитна анемія, вагітність, повторнонагітні жінки, аборт, невиношування вагітності.

Abortion is a very important medical and social problem, has been widely discussed in the mass media. Proposals for abortions, abortion of a woman of her own free will, and issues of free medical assistance to citizens are based on state programs. The health of the population is a sociobiological indicator of the well-being of the population in the region, which reflects the reproductive health and the reproductive potential of the population [2, 8]. Abortion in Azerbaijan is legal on request up to 12 weeks of pregnancy, and in specific circumstances between 12 and 22 weeks. The medical and social risk factors of reproductive health are manifested in induced abortion of unintended pregnancies. Diseases of the reproductive system organs occur due to abortion, reduce the future birth rate, increase the number of female infertility, and increase the problem of continuing the generation of children born. Abortion is of sociomedical importance and has a significant impact on the health of future mothers and the weakening of their offspring [2].

Protection of maternal and child health is one of the priority areas of health services, and the problem of protecting maternal and child health in recent years continues to be one of the important problems of world healthcare [4]. Among the diseases, anemia has a special place in women during a fertile period as well as in pregnant women, children, and newborns. According to various authors, anemia in pregnant women ranges from 15 % to 30 %. The frequency of anemia is characterized by a low level of hemoglobin in the blood, according to the World Health Organization, it is 21–80 % [7].

Children (IDA occurs in 90 % of cases), women with multiple pregnancies (60 %), and babies in the first years of life suffer from iron deficiency [5]. In modern times, as a result of conducting the course of pregnancies and births according to clinical protocols based on evidence-based medicine, newborns with a high Apgar score between 7–10 points are the majority. Iron deficiency anemia adversely affects the course of pregnancy, the outcome of childbirth, and the development of the fetus, and causes complications such as preeclampsia, early disruption of pregnancy, polyhydramnios, early leaking of amniotic fluid, birth weakness, losing lots of blood, septic complications of the postpartum period, hypogalactia, etc. [1].

Thus, reducing anemia and preventing iron deficiency is one of the main healthcare problems.

Taking into account all above mentioned, in multiparous women, we analyzed the course of pregnancy and childbirth in multiparous women with abortion in anamnesis.

**The purpose** of the study was to analyze the course of pregnancy and childbirth in multiparous women with iron-deficiency anemia who had spontaneous and induced abortions.

**Materials and methods.** The study was carried out on 80 pregnant women who applied to maternity hospital No. 5 named after Sh. Alasgarova under the II Department of Obstetrics and Gynecology of AMU and women's consultation center, Baku, in 2014–2022. HIV, RW, HCV, HBsAg, general blood analysis, biochemical analysis, blood sugar, and Coagulogram analysis were performed in all pregnant women in the I, II, III trimesters. Infections complicating pregnancy were excluded. USM, Dopplerometry, ECG, and CTG scans were performed as additional examination methods. Medical history was carefully collected from all the pregnant women, and the reason and the number of abortions were studied. The research was conducted on women with iron deficiency anemia (IDA). The women of reproductive age including 25 multiparous women (aged 28–33) without a history of abortion and 55 multiparous women (aged 30–36) having a history of abortion. Multiparous pregnant women with iron deficiency anemia who having a history of abortion group included spontaneous and induced abortion. In the anamnesis of pregnant women, there was a majority of induced abortions in their history. The reason for induced abortions was unplanned pregnancy and social reasons. Induced abortions were performed at 4–8 weeks ( $6.0 \pm 1.4$ ) of pregnancy. The spontaneous abortions in study women occurred by several factors. All women who had both type of abortion included the group of women with abortion.

Regarding the social status of the examined women, 84.0 % of the pregnant women without a history of abortion were housewives, 16.0 % of them were working women; 72.7 % of the pregnant women with a history of abortion were housewives, 27.3 % of them were working women ( $P_{\chi^2}=0.272$ ;  $P_U=0.275$ ). Regarding the age groups, the number of women without a history of abortion was 11 (44.0 %) in 18–42-year-old patients and 14 (56.0 %) in 30–40-year-old patients, while the number of women who had an abortion in their history was 13 (23.6 %) and 42 (76.4 %)  $P_{\chi^2} = 0.065$  in the respective age groups.

According to the classification provided by WHO experts (2011), anemia is defined as mild (Hb 100–109 g/l), moderate (Hb 70–99 g/l), and severe (Hb below 70 g/l). Hemogram was estimated using “Mythic 18” (Switzerland) hematological analyzer, serum iron was determined biochemically using the chromazurol (CAB) method with the reagent kit belonging to the German company “Human”, Serum ferritin was studied by solid-phase immunoenzymatic method (ELISA) using the reagent kit of “Pishtaz Teb” (Islamic Republic of Iran) company.

The statistical reliability of the difference between the indices of the groups was calculated in the SPSS–26 program with the Pt (Student-Bonferon),  $P_{\chi^2}$  (Pearson),  $P_U$  (Mann-Whitney) criteria.

The present study was approved by the university ethics committee (Ref.no: AMU/ IEC/№24/ 22.07.2022).

The prospective, cross-sectional research included 25 multiparous women without a history of abortion and 55 multiparous women having a history of abortion with iron deficiency anemia (IDA).

**Results of the study and their discussion.** During the study, a comparative analysis of the course of pregnancy and childbirth of multiparous pregnant women with IDA with a history of abortion and multiparous pregnant women with IDA without a history of abortion was performed (Table 1).

Mild anemia was found in 7 (30.4 %) multiparous women without a history of abortion, 16 (69.6 %) multiparous women with a history of abortion; moderate anemia was found in 17 (31.5 %) multiparous women without a history of abortion, 37 (68.5 %) multiparous women with a history of abortion, severe anemia was found in 1 (33.3 %) multiparous woman without a history of abortion, and 2 (66.7 %)  $P_{\chi^2}=0.993$  multiparous women with a history of abortion.

The risk of miscarriage during pregnancy was in 24.0 % of women without a history of abortion, and 54.5 % of those with a history of abortion ( $P_{\chi^2}=0.011$ ;  $P_U=0.011$ ). CGH (complicated gynecological history) was recorded in 0.0 % of patients without a history of abortion, and in 9.1 %, ( $P_{\chi^2}=0.119$ ;  $P_U=0.122$ ) of those with a history of abortion. BOH (bad obstetric history) was found in 20.0 % of women

without a history of abortion and in 61.8 % ( $P_{\chi^2}=0.001$ ;  $P_U=0.001$ ) of those with a history of abortion. Extragenital diseases were observed in 20.0 % of patients without a history of abortion, and 21.8 % ( $P_{\chi^2}=0.854$ ;  $P_U=0.855$ ) of those with a history of abortion.

Table 1

**Clinical analysis of pregnancy and childbirth in multiparous women with IDA with and without a history of abortion**

		Abortion				$p_{\chi^2}$	$P_U$
		Not found		Found			
		Number	%	Number	%		
Uterine scarring	Not found	18	72.0 %	44	80.0 %	0.563	0.485
	1 scar	3	12.0 %	3	5.5 %		
	2 scars	4	16.0 %	8	14.5 %		
Extragenital diseases	Not found	20	80.0 %	43	78.2 %	0.854	0.855
	Found	5	20.0 %	12	21.8 %		
CGH	Not found	25	100.0 %	50	90.9 %	0.119	0.122
	Found	0	0.0 %	5	9.1 %		
The risk of miscarriage	Not found	19	76.0 %	25	45.5 %	0.011	0.011
	Found	6	24.0 %	30	54.5 %		
Intrauterine hypoxia	Not found	15	60.0 %	26	47.3 %	0.291	0.294
	Found	10	40.0 %	29	52.7 %		
IUGR	Not found	25	100.0 %	49	89.1 %	0.086	0.088
	Found	0	0.0 %	6	10.9 %		
FP insufficiency	Not found	25	100.0 %	49	89.1 %	0.229	0.088
	I degree	0	0.0 %	5	9.1 %		
	II degree	0	0.0 %	0	0.0 %		
	III degree	0	0.0 %	1	1.8 %		
Preeclampsia	Not found	20	80.0 %	41	74.5 %	0.595	0.597
	Found	5	20.0 %	14	25.5 %		
Preeclampsia degrees	Not found	20	80.0 %	41	74.5 %	0.479	0.490
	Mild	1	4.0 %	2	3.6 %		
	Severe	4	16.0 %	12	21.8 %		
PROM	Not found	14	56.0 %	25	45.5 %	0.382	0.385
	Found	11	44.0 %	30	54.5 %		
BOH	Not found	20	80.0 %	21	38.2 %	0.001	0.001
	Found	5	20.0 %	34	61.8 %		
Birth weakness	Not found	21	84.0 %	35	63.6 %	0.122	0.052
	I degree	4	16.0 %	15	27.3 %		
	II degree	0	0.0 %	5	9.1 %		
Time	On time	20	80.0 %	42	76.4 %	0.718	0.720
	premature	5	20.0 %	13	23.6 %		
Fetal position at birth	Head- down	24	96.0 %	51	92.7 %	0.575	0.578
	Breach	1	4.0 %	4	7.3 %		
Childbirth	Physiological	17	68.0 %	35	63.6 %	0.704	0.706
	Cesarean delivery	8	32.0 %	20	36.4 %		
Sex	Male	11	44.0 %	33	60.0 %	0.182	0.185
	Female	14	56.0 %	22	40.0 %		
Rh	Rh+	22	88.0 %	48	87.3 %	0.927	0.928
	Rh-	3	12.0 %	7	12.7 %		
Postpartum period	Not found	23	92.0 %	53	96.4 %	0.407	0.409
	Found	2	8.0 %	2	3.6 %		

Note: statistical reliability of the difference between the indices of the groups:  $P_{\chi^2}$  – According to the Chi-square Pearson criterion;  $P_U$  – According to the Mann Witney U criterion

IH (Intrauterine hypoxia) was found in 40 % of women without a history of abortion, and 52.7 % ( $P_{\chi^2}=0.291$ ;  $P_U=0.294$ ) of those with a history of abortion. IUGR (Intrauterine growth retardation) was found in 0.0 % of women without a history of abortion, 10.9 % ( $P_{\chi^2}=0.086$ ;  $P_U=0.088$ ) of those with a history of abortion, the I degree of FP (fetoplacental) insufficiency was found in 0.0 % of those without a history of abortion, 9.1 % of those with a history of abortion, the II degree of FP insufficiency was observed in 0.0 % of women without a history of abortion, 0.0 % of those with a history of abortion, the III degree

was found in 0.0 % of women who did not have an abortion, 1.8 % ( $P_{\chi^2}=0.229$ ;  $P_U=0.088$ ) of those who had an abortion.

Mild preeclampsia was found in 20.0 % of women without a history of abortion, 16.3 % of those with a history of abortion, severe preeclampsia was found in 0.0 % of patients without a history of abortion, and 9.1 % ( $P_{\chi^2}=0.479$ ;  $P_U=0.490$ ) of those with a history of abortion. In general, preeclampsia was found in 5 % ( $P_{\chi^2}=0.595$ ;  $P_U=0.597$ ) of patients without a history of abortion, and 25.5 % of those with a history of abortion.

Physiological birth occurred in 68.8 % of women without a history of abortion, 63.6 % of those with a history of abortion, cesarean section occurred in 32.0 % of those without a history of abortion, 36.8 % of those with a history of abortion, abdominal birth occurred in 32.0 % of patients without a history of abortion, 36.4 % ( $P_{\chi^2}=0.704$ ;  $P_U=0.706$ ) of those with a history of abortion. Prolonged 1st stage of labor occurred in 16.0 % of women without a history of abortion, 27.3 % of those with a history of abortion, prolonged 2nd stage of labor occurred in 0.0 % of patients without a history of abortion, 9.1 % ( $P_{\chi^2}=0.122$ ;  $P_U=0.052$ ) of those with a history of abortion. Premature birth occurred in 20.0 % of patients without a history of abortion, and 23.6 % ( $P_{\chi^2}=0.718$ ;  $P_U=0.720$ ) of those with a history of abortion. Complications during the postpartum period were found in 8.0 % of patients without a history of abortion and 3.6 % ( $P_{\chi^2}=0.407$ ;  $P_U=0.409$ ) in those with a history of abortion.

Regarding the assessment of the condition of newborns with the Apgar score in the first 5 minutes,  $7.8 \pm 0.2$  Me=8.0(8.0-8.0) was recorded in those without a history of abortion,  $7.6 \pm 0.1$  Me=8.0(7.0-8.0)  $P_U=0.067$  in those with a history of abortion; as for the weight of newborns, it was  $3136.0 \pm 103.6$  Me=3200.0(2900.0-3400.0),  $P_U=0.688$  in those without a history of abortion, the height was recorded to be  $49.9 \pm 0.7$  Me=51.0(50.0-52.0) in those without a history of abortion, and  $50.4 \pm 0.4$  Me=51.0(49.0-52.0)  $P_U=0.736$  in those with a history of abortion (Table 2).

Table 2

**Analysis of hemogram indices during pregnancy in multiparous women with IDA**

	Women who have not had an abortion				Women who have had an abortion				P <sub>U</sub>
	Mean	Median	Percentile 25	Percentile 75	Mean	Median	Percentile 25	Percentile 75	
RBC 10 <sup>12</sup> /l	3.73	3.80	3.60	3.90	3.68	3.70	3.60	3.90	0.306
HCT %	30.7	30.1	29.3	32.2	30.8	30.5	29.4	32.4	0.540
HGB g/dl	9.1	9.2	8.2	10.0	9.2	9.2	8.5	10.0	0.740
MCV Mm <sup>3</sup>	82.8	82.3	78.6	84.5	84.1	83.9	81.0	87.9	0.184
MCH pg	24.4	25.4	22.6	25.8	25.1	25.4	22.8	27.4	0.140
MCHC g/dl	29.7	30.6	27.2	31.5	29.8	30.0	28.5	31.8	0.988
Fe mkmol/l	7.42	7.40	6.30	8.40	7.28	7.10	6.10	8.50	0.712
TIBC mmol/l	69.9	69.8	66.3	72.6	69.9	70.7	68.5	74.0	0.439
LIBC mmol/l	62.5	62.1	58.4	65.3	62.6	64.0	61.3	67.6	0.350
TS %	10.7	11.0	8.8	12.3	10.7	9.7	8.6	12.4	0.547
Ferritin mmol/l	15.3	11.2	9.7	17.8	13.1	10.1	9.1	17.0	0.389

Note: M-mean,  $\pm$ m-standard error, Me –medium, Q1, Q2 – I and III quartiles, statistical reliability of the differences according to the PSB-Student Bonferroni and P<sub>U</sub>-Mann Whitney U criteria

As seen, RBC (Red blood cell) count was  $3.73 \pm 0.06$  Me=3.80 (3.60-3.90) in women without a history of abortion, and  $3.68 \pm 0.04$  Me=3.70(3.60-3.90)  $P_U=0.306$  in women with a history of abortion; HCT (hematocrit) was  $30.7 \pm 0.4$  Me=30.1(29.3–32.2) in women without a history of abortion,  $30.8 \pm 0.3$  Me=30.5(29.4–32.4)  $P_U=0.540$  in women with a history of abortion; HGB (hemoglobin) was  $9.1 \pm 0.2$  Me=9.2(8.2–10.0) in women without a history of abortion,  $9.2 \pm 0.1$  Me=9.2(8.5–10.0)  $P_U=0.740$  in women with a history of abortion; MCV (Mean corpuscular volume) was  $82.8 \pm 1.4$  Me=82.3(78.6–84.5) in those without a history of abortion,  $84.1 \pm 0.7$  Me=83.9(81.0–87.9)  $P_U=0.184$  in patients with a history of abortion; MCH (mean corpuscular hemoglobin) was  $24.4 \pm 0.4$  Me=25.4(22.6–25.8)  $P_U=0.140$  in those with a history of abortion; MCHC (mean corpuscular hemoglobin concentration) was recorded to be  $29.7 \pm 0.7$  Me=30.6(27.2–31.5) in women without a history of abortion,  $29.8 \pm 0.3$  Me=30.0(28.5–31.8)  $P_U=0.988$  in those with a history of abortion; Fe (iron) was  $7.42 \pm 0.26$  Me=7.40(6.30–8.40) in women without a history of abortion,  $7.28 \pm 0.20$  Me=7.10 (6.10–8.50)  $P_U=0.712$  in those with a history of abortion; TIBC (total iron-binding capacity) was  $69.9 \pm 1.2$  Me=69.8(66.3–72.6) in women without a history of abortion,  $69.9 \pm 1.1$  Me=70.7(68.5–74.0)  $P_U=0.439$  in those with a history of abortion; LIBC (latent iron-binding capacity) was  $62.5 \pm 1.3$  Me=62.1(58.4–65.3) in women without a history of abortion,  $62.6 \pm 1.2$  Me=64.0(61.3–67.6)  $P_U=0.350$  in those with a history of abortion; TS (Transferrin saturation) was  $10.7 \pm 0.5$  Me=11.0(8.8–12.3) in women without a history of

abortion,  $10.7 \pm 0.5$  Me=9.7(8.6–12.4)  $P_U=0.547$  in those with a history of abortion; Ferritin was  $15.3 \pm 2.3$  Me=11.2(9.7–17.8) in women without a history of abortion,  $13.1 \pm 1.1$  Me=10.1(9.1–17.0)  $P_U=0.389$  in those with a history of abortion.

Abortion is considered safe when performed by qualified personnel using the methods recommended by WHO. Such disruption of pregnancy is performed with the help of abortion pills (medical abortion) or by simple outpatient surgery [12]. The term medical abortion means that the abortion procedure is safe [10]. WHO considers safe abortion with mifepristone and misoprostol or surgical abortion with vacuum aspiration dilation and evacuation as effective options for women [12]. According to the interview with the women we researched, we can conclude that the abortions performed among them followed medical and social instructions.

Medical abortion is performed on pregnant women before 20 weeks of gestation when the weight of the fetus is below 500 grams. According to Lin TB, et al, this includes spontaneous abortion, and complete, incomplete, stillbirth, habitual, and induced abortions can be performed surgically in pregnant women [11]. The women included in the study underwent induced and spontaneous abortions, which occurred in the early period of pregnancy, besides, in the studied group, complex obstetrics cases (anembryonic pregnancy, spontaneous abortions) were significantly more common, and complicated gynecological anamnesis (infertility) were relatively less common, and this is because induced abortions were performed in specialized medical institutions. At the same time, among women in labor, the rate of early leaking of amniotic fluid is much higher, and as a result, we also encountered a lot of birth weakness.

Our current research involved multiparous women with IDA having a history of abortion. During pregnancy, specific changes occur in a woman's body, especially in the reference ranges for blood tests. The determination of these changes helps to avoid unnecessary interventions, blood tests, and incorrect imaging. At the end of the II trimester, compared to non-pregnant women, the blood plasma volume of pregnant women increases by 10 %, while the mass of erythrocytes, which leads to a decrease in hemoglobin concentration, increases by only 25–30 % (physiological anemia of pregnancy) [6]. The incidence of anemia was significantly higher among the multiparous women. The presence of anemia in pregnant women causes its clinical image to manifest, which greatly affects their quality of life.

During the study, there were no reliable changes in the laboratory indicators of iron deficiency anemia in the group of multiparous women who underwent spontaneous and induced abortion.

The widespread prevalence of anemic syndrome among pregnant women and a number of possible complications in the presence of concomitant pathologies (perinatal death, intrauterine growth restriction, neonatal asphyxia, birth weakness, increased bleeding) make it relevant to study the pathogenesis of anemia, as well as to improve laboratory diagnostic methods [15]. In our study, extragenital diseases that negatively affect anemic indices were excluded.

In women with a history of spontaneous abortion, the next pregnancy leads to the development of preeclampsia [13]. This can be extended to the pregnant women in our study, as in moderate-severe anemia, preeclampsia has reached a severe level.

It is considered that the negative effect of anemia in pregnancy on the fetoplacental system and child health is not only limited to the perinatal period but also continues afterward. According to the information of various authors, gestational anemia causes a delay in weight and length growth, even though the hematological parameters are normal, the incidence of infectious diseases is high [1]. Fetoplacental syndrome and intrauterine growth restriction were found also in the pregnant women studied by us.

Insufficient iron reserve before the pregnancy and a low number of red blood cells in the mother and fetus are unpleasant. According to statistics, depending on the socioeconomic status, 38 % of pregnant women suffer from IDA [3]. This result is also valid in our study and mild and moderate anemias were most common. Although the changes in the hemogram in women who underwent spontaneous and induced abortion were not reliable, the high number of abortions can be seen as a reason for the development of clinical signs of anemia among pregnant women.

According to the literature data, women living in poverty in remote areas are less likely to receive adequate healthcare, particularly in obstetrics and gynecology. Maternal death is significantly related to the low-quality medical care during childbirth, whereas, the prevention of this problem or treatment would be easily implemented. While reproductive healthcare for women in all developing nations gets the attention it deserves, the population of under-resourced regions faces disparate barriers to healthcare [8, 9]. In our republic, healthcare plays a beneficial role in preventing abortions, and propaganda and agitation work is carried out to prevent induced abortions.

Diverse models of self-managed medication abortion exist - ranging from interaction with medical personnel to completely autonomous abortion [14]. Induced abortions of the studied women were

performed legally, and medical abortions followed clinical protocols in some cases and were performed under stationary conditions. Perhaps this is the reason for the absence of serious problems in their subsequent pregnancies and births after abortions.

### Conclusion

According to our study, the incidence of abortion is higher in the 30–44 age group and housewives. Abortions resulted in a significantly increased risk of pregnancy disruption, preeclampsia, early leaking of amniotic fluid, and birth weakness. This has led to the implementation of additional medical measures and interventions. Analysis of laboratory indices of iron deficiency anemia did not show reliable changes. Improved management of pregnancy and its course has a significant impact on the delivery of high-scoring newborns. Thus, in order to prevent unintended pregnancies or spontaneous abortions, women should consult a women's counseling center. Contraceptives should be used correctly and concomitant diseases should be treated. This can prevent complications during pregnancy and childbirth in advance. At the same time, the role of healthcare and the public in educating women is undeniable, and this can be beneficial by preventing the implementation of abortions.

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