

DOI: 10.26693/jmbs07.01.177

UDC 618.2-055.25

Safarova R. B.

THE COURSE OF PREGNANCY AND THE OUTCOME OF CHILDBIRTH IN WOMEN OF OLDER REPRODUCTIVE AGE

Azerbaijan Medical University, Baku, Azerbaijan Republic

The purpose of the study was to determine the frequency and structure of complications of pregnancy and childbirth in pregnant women of the older age group according to the history data.

Materials and methods. We examined 90 pregnant women aged 35-44 years. The groups were divided as follows: the main group (I) consisted of 30 patients, the comparison group (group II) – 30 patients and the control group (group III) – 30 patients. All patients, according to the existing standards of obstetric examination, underwent clinical and laboratory tests. Randomization was carried out according to age, social factors, concomitant gynecological and extragenital diseases. For the study, a questionnaire was developed, which, along with the social characteristics of women (age, education level, marital status), included questions about women's employment, reproductive behavior, the presence of sexually transmitted diseases, and inflammatory diseases of the female genital organs.

Results and discussion. In women of older reproductive age, the course of the gestational period is reliably more often complicated by gestosis – (40.0-46.7%), the threat of termination of pregnancy (36.7-5%), premature childbirth (26.7-33.3%). In childbirth, this contingent of women is more likely to have weakness in labor (10.0-13.3%). The results of the study show that in women of the main group, pregnancies ended with spontaneous abortions significantly more often – 9 (30%), the number of operative deliveries was significantly higher – 4 (13.3%), in the comparison group there were 9 (30%) and 2 (6.7%) such women, respectively. The main complaints in previous pregnancies were pain in the lumbar region and lower abdomen – 53.3% and 46.6% among pregnant women in the main group and the comparison group. Nausea and vomiting were observed in 9 (30%) and 8 (26.6%) women, respectively, in both groups, however, in the control group, the incidence of this complaint was also quite high (16.6%). In 5 (16.6%) and 7 (23.3%) women, bloodstroke from the in vitro fertilization was revealed. In all three groups, the most common complaint was neurovegetative symptoms: sleep disturbance (8-26.6%, 10-33.3% and 4-13.3%), and appetite disturbance (10-33.3%, 6.0-20%, 9-30%). Also, 5 (16.6%) pregnant women of the main group and 6 (20%) of the comparison group complained of increased blood pressure from

8-10 weeks of pregnancy. Pregnancy in patients aged 35 years and older should be classified as pathological already in the pregravid period.

Conclusion. Thus, pregnant women aged 35 and older have an extremely unfavorable background from the obstetric-gynecological history and the frequency of abdominal delivery is by 2.5-3 times higher than in the control group.

Keywords: pregnancy, outcome of childbirth, older reproductive age, women, complications, caesarean section.

Introduction. One of the risk factors for the normal course of pregnancy and childbirth is the patient's age [1, 2]. In recent years, there has been a trend towards an increase in the number of pregnant women in the older age group.

According to the literature, in pregnant women of the older age group, various complications of pregnancy and childbirth are more common, leading to an increase in perinatal morbidity and mortality, an increase in the number of surgical interventions [3, 4].

The purpose of the study is to determine the frequency and structure of complications of pregnancy and childbirth in pregnant women of the older age group according to the history data.

Materials and methods. To achieve this goal, we examined 90 pregnant women aged 35-44 years. The groups were divided as follows: the main group (group I) consisted of 30 patients, the comparison group (group II) – 30 patients and the control group (group III) – 30 patients. In the main group, previous pregnancies were difficult, during this pregnancy ozone therapy was added to the treatment, in group II, the examination and treatment of women was carried out according to the generally accepted protocol. Group III consisted of practically healthy women with normal course of pregnancy. All patients, according to the existing standards of obstetric examination, underwent clinical and laboratory tests. Randomization was carried out according to age, social factors, concomitant gynecological and extragenital diseases.

All experiments were conducted in accordance with the Council of Europe Convention "On the Protection of Human Rights and Dignity of the Human Being with regard to the Application of Biology and Medicine Application of Biological and Medicine Achievements (ETS No. 164)" dated 04.04.1997, and

the Helsinki Declaration of the World Medical Association (2008). Each study patient signed an informed consent to participate in the study and all measures to ensure anonymity of patients were taken.

All pregnant women underwent a detailed clinical examination according to protocol No. 8 dated March 11, 2013, Ministry of Health of the Azerbaijan Republic. For the study, a questionnaire was developed, which, along with the social characteristics of women (age, education level, marital status), included questions about women's employment, reproductive behavior, the presence of sexually transmitted diseases, and inflammatory diseases of the female genital organs. In order to study the prevalence of diseases of female genital organs, the results of medical examinations of women conducted by doctors of antenatal clinics were also analyzed. The results of the questionnaire and medical examination were entered into the medical observation card.

The results obtained were processed using modern statistical analysis software packages. The difference in values was taken statistically significant at $p < 0.05$.

Results and discussion.

Among pregnant women involved in production, in one case there was an indication of contact with occupational hazards (dyes), which could affect the course and outcome of pregnancy. Material and living conditions for all women were satisfactory. Most of the observed were married, 5 (5.5%) had a second marriage.

Analysis of the obstetric history revealed that there were 18 (60%) pregnant women in the main group, 14 (46.6%) pregnant women in the comparison group, and 19 (63.3%) pregnant women in the control group. Medical abortions in the main group were present in a history of 29 (96.6%) women, in the comparison group – 30 (100%) women and in the control group – 11 (36.7%): 43.3% of the main group, 56.6% of the comparison group and 23.3% of the control group; 4-6 abortions – 43.3% of the main group, 30% of the comparison group and 10% of the control group. The development of an inflammatory process took place in pregnant women of the comparison group, as complications during

induced abortion 2 times more often, compared with the main group, in 13 patients bleeding occurred. As can be seen from the data presented in the table, in women of the main group, previous pregnancies more often ended in spontaneous miscarriages – 2 (6.6%), in the main group there were 16.6% and 13.3% of such women, against (p). This pregnancy was repeated in all the subjects (**Table 1**).

Let's consider the structure of pregnancy outcomes among the surveyed women. From the data presented it is clear that the first pregnancy ends with live childbirth, while their share was 53.3%. It is noteworthy that the second or third pregnancy is most often interrupted by artificial abortion. At the same time, the proportion of patients who had an induced abortion during the second pregnancy was 50%. In the structure of the outcomes of the third pregnancy, the largest proportion of miscarriages was noted, the etiology was elucidated.

Table 1 – Obstetric analysis of examined pregnant women

Indicators	Main group (n=30)		Comparison group (n=30)		Control group (n=30)	
	abs. n	%	abs. n	%	abs. n	%
Primary pregnant	-	-	4	13.3	-	-
Re-pregnant	30	100	26	86.7	30	100
Primiparous	12	40	16	53.3	11	36.7
Multiparous	18	60	14	46.7	19	63.3
Premature birth (history)	9	30	10	33.3	-	-
1-2	3	10	4	13.3	-	-
3-4	4	13.3	4	13.3	-	-
>5	2	6.7	2	6.7	-	-
Spontaneous miscarriage	9	30	9	30	2	6.7
1-2	5	16.7	4	13.3	2	6.7
3-4	2	6.7	4	13.3		
>5	2	6.7	1	3.3		
Artificial abortion						
1-3	13	43.3	17	56.7	7	23.3
4-6	13	43.3	9	30	3	10
7-9	2	6.7	4	13.3	1	3.3
>10	1	3.3	-	-	-	-
Non-developing pregnancy	3	10	3	10	-	-
Ectopic pregnancy	1	3.3	-	-	-	-
Normal childbirth	4	13.3	5	16.7	27	90
Operative labor (cesarean section)	4	13.3	2	6.7	1	3.3

In the survey, the most common reasons for induced abortions were material difficulties (63.3%), poor living conditions (23.3%), family conflicts (13.3%). The most common reason for miscarriages among patients was illness during pregnancy and severe nervous tension, this was indicated by 61.1% and 38.8% of respondents, respectively.

The most common reason for the birth of a desired child among women of late fertile age is employment, which was noted by 60% of patients.

Given the high proportion of adverse outcomes previous gestation, we made an attempt to establish the nature of the course of previous pregnancies. In women of the main group, pregnancies ended with spontaneous abortions significantly more often – 9 (30%), the number of operative deliveries was significantly higher – 4 (13.3%), in the comparison group there were 9 (30%) and 2 (6.7%) such women, respectively. Taking into account the high proportion of unfavorable outcomes of the previous gestation, we made an attempt to establish the nature of the course of previous pregnancies. It was found that each of the 30 women of the main group, who had a history of pregnancy, was admitted to the hospital because of the threat of early termination of pregnancy. In 7 (23.3%) women, pregnancy was terminated for medical reasons at 22-24 weeks, 3 (10%) pregnant women of the main group prolonged pregnancy until the physiological term of labor, and delivery was limited by shortening the laboring period due to episiotomy (episioraphy). An analysis of the outcome of previous pregnancies and childbirth showed that in the main and comparative groups, a sufficient number of subjects had a history of premature birth. In the comparison group, preterm birth preceded real pregnancy in 30%. Spontaneous miscarriage before 16 weeks was noted by 9 pregnant women (30%), medical abortion at 22-24 weeks was performed in 4 patients (13.3%). Physiological childbirth was completed in only 7 pregnant women of the comparison group (23.3%) and in 2 (6.6%) by caesarean section according to indications from the fetus. When diagnosing the threat of preterm birth, the complaints of pregnant women were also taken into account.

The main complaints in previous pregnancies were pain in the lumbar region and lower abdomen – 53.3% and 46.6% of pregnant women in the main group and the comparison group. Nausea and vomiting were observed in 9 (30%) and 8 (26.6%) women, respectively, in both groups, however, in the control group, the incidence of this complaint was also quite high (16.6%). In 5 (16.6%) and 7 (23.3%) women, bloodstroke from the in vitro fertilization was revealed. In all three groups, the most common complaint was neurovegetative symptoms: sleep disturbance (8-26.6%, 10-33.3% and 4-13.3%), and appetite distur-

bance (10-33.3%, 6-20%, 9-30%). Also, 5 (16.6%) pregnant women of the main group and 6 (20%) of the comparison group complained of increased blood pressure from 8-10 weeks of pregnancy.

Gestosis and the threat of termination of pregnancy were the most frequent complications of pregnancy and occurred in every third patient (we used the terminology adopted before 2014). It should be noted that in most cases, gestosis had an average course, and a threatening miscarriage was pronounced and in 43.3% (26 pregnant women in the main and comparative groups) required inpatient treatment. In second place in terms of the frequency of complications was anemia of pregnant women, which was also of a moderate nature. The third most frequent complication was edema of pregnant women, which was present in every 2nd pregnant woman. Isthmico-cervical insufficiency was noted by 7 patients (4 pregnant women in the main group and 3 in the comparison groups), however, the diagnosis was not confirmed in this pregnancy (**Table 2**).

Table 2 – Frequency of complications of previous pregnancy in the examined patients

Complications	Main group (n=30)		Comparison group (n=30)		P
	abs. n	%	abs. n	%	
Gestosis	12	40	14	46.7	p<0.05
Risk of miscarriage	11	36.7	15	50	
Threat of premature birth	8	26.7	10	33.3	
Anemia of pregnancy	11	36.7	12	40	
Swelling of pregnant women	8	26.7	7	23.3	
Isthmico-cervical insufficiency	4	13.3	3	10	

When analyzing the course of previous births, it was found that only 9 (15%) patients of the main and the comparison group had a normal course of labor. Premature rupture of amniotic fluid was found in 43.3% (26 pregnant women of both groups) of cases, while in 8.3% (5) there was an admixture of meconium in the amniotic fluid. A flat bladder was diagnosed in 6 (10%) patients. The most common complication during childbirth was anomalies of uterine contractile activity, which were diagnosed in every second woman (14-23.3%), while primary weakness of labor was more common (21-35%), compared with secondary. Nine pregnant women (15%) delivered with the help of caesarean section (**Table 3**).

Table 3 – Indications for caesarean section surgery

Outcomes of previous pregnancies	Main group (n=30)		Comparison group (n=30)		p
	abs. n	%	abs. n	%	
Abnormalities of labor	3	10	4	13.3	p<0.05
Clinically narrow pelvis	1	3.3	2	6.7	p<0.05
Lack of effect from drug stimulation	2	6.7	1	3.3	p<0.05
Fetal hypoxia	8	26.6	6	20	
Scar on the uterus	1	3.3	1	3.3	

Nine pregnant women had 29 indications for caesarean section i.e. each had 3.2 indicators. 17 children (28.3%) were born in two groups. The assessment of children who appeared in women over 35 years old, according to the Apgar scale in 8 (13.3%) observations, was not lower than 8 / 8-8 / 9 points.

The condition of six newborns was assessed at 6-8 points, 1 at 1 point. The average weight was 2760 ± 124 g, nine newborns were underweight. Our results are consistent with the results of studies conducted in women of the studied age [5-9].

Conclusions

1. Pregnant women aged 35 and older have an extremely unfavorable background from the obstetric-gynecological history.
2. Pregnancy in patients aged 35 years and older should be classified as pathological already in the pregravid period: the course of the gestational period is reliably more often complicated by gestosis – (40-46.7%), the threat of termination of pregnancy (36.7-5%), premature birth (26.7-33.3%).
3. In childbirth, this contingent of women is more likely to have weakness in labor (10-13.3%).
4. The frequency of abdominal delivery is by 2.5-3 times higher than in the control group.

Perspectives of further research. In the future, it is planned to study the results of ozone therapy treatment in women of older reproductive age.

References

1. Cavazos-Rehg PA, Krauss MJ, Spitznagel EL, Bommarito K, Madden T, Olsen MA, et al. Maternal age and risk of labor and delivery complications. *Matern Child Health J.* 2015 Jun;19(6):1202-11. PMID: 25366100. PMCID: PMC4418963. doi: 10.1007/s10995-014-1624-7
2. Usta IM, Nassar AH. Advanced maternal age. Part I: obstetric complications. *Am J Perinatol.* 2008 Sep;25(8):521-34. PMID: 18773378. doi: 10.1055/s-0028-1085620
3. Hunter AG, Cappelli M, Humphreys L, Allanson JE, Chiu TT, Peeters C, et al. A randomized trial comparing alternative approaches to prenatal diagnosis counseling in advanced maternal age patients. *Clin Genet.* 2005 Apr;67(4):303-13. PMID: 15733266. doi: 10.1111/j.1399-0004.2004.00405.x
4. Lampinen R, Vehviläinen-Julkunen K, Kankkunen P. A Review of Pregnancy in Women Over 35 Years of Age. *Open Nurs J.* 2009 Aug 6;3:33-8. PMID: 19707520. PMCID: PMC2729989. doi: 10.2174/1874434600903010033
5. Dietl A, Cupisti S, Beckmann MW, Schwab M, Zollner U. Pregnancy and Obstetrical Outcomes in Women Over 40 Years of Age. *Geburtshilfe Frauenheilkd.* 2015 Aug; 75(8): 827-832. PMID: 26366002. PMCID: PMC4554509. doi: 10.1055/s-0035-1546109
6. Bouzaglou A, Aubenat I, Abbou H, Rouanet S, Carbonnel M, Pirtea P, et al. Pregnancy at 40 years Old and Above: Obstetrical, Fetal, and Neonatal Outcomes. Is Age an Independent Risk Factor for Those Complications? *Front Med.* 2020;7:208. PMID: 32537454. PMCID: PMC7266997. doi: 10.3389/fmed.2020.00208
7. Ziadeh SM. Maternal and perinatal outcome in nulliparous women aged 35 and older. *Gynecol Obstet Invest.* 2002;54:6-10. PMID: 12297710. doi: 10.1159/000064689
8. Yogeve Y, Melamed N, Bardin R, Tenenbaum-Gavish K, Ben-Shitrit G, Ben-Haroush A. Pregnancy outcome at extremely advanced maternal age. *Am J Obstet Gynecol.* 2010;203:558.e1-7. PMID: 20965486. doi: 10.1016/j.ajog.2010.07.039
9. Jackson S, Hong C, Wang ET, Alexander C, Gregory KD, Pisarska MD. Pregnancy outcomes in very advanced maternal age pregnancies: the impact of assisted reproductive technology. *Fertil Steril.* 2015;103:76-80. PMID: 25450294. PMCID: PMC7202798. doi: 10.1016/j.fertnstert.2014.09.037

УДК 618.2-055.25

ПЕРЕБІГ ВАГІТНОСТІ І ПОЛОГІВ У ЖІНОК СТАРШОГО РЕПРОДУКТИВНОГО ВІКУ

Сафарова Р. Б.

Резюме. Мета. Визначити частоту і структуру ускладнень вагітності та пологів у вагітних старших вікових груп за даними анамнезу.

Матеріал та методи. Обстежено 90 вагітних жінок віком 35-44 років. Групи були розділені наступним чином: основну групу (I) склали 30 пацієнток, групу порівняння (II групу) – 30 пацієнток, та

контрольну групу (III групу) – 30 пацієнток. В основній групі попередні вагітності протікали важко, пацієнткам до лікування додавали озонотерапію; у II групі обстеження та лікування жінок проводили за загальноприйнятим протоколом. III групу склали практично здорові жінки з нормальним перебігом вагітності. Всім пацієнткам, згідно з діючими стандартами акушерського обстеження, було проведено клініко-лабораторні дослідження.

Рандомізація проводилась за віком, соціальними факторами, супутніми гінекологічними та екстрагенітальними захворюванням. Для дослідження була розроблена анкета, в яку поряд із соціальними характеристиками жінок (вік, рівень освіти, сімейний стан) були включені питання про зайнятість жінок, репродуктивну поведінку, наявність венеричних захворювань, запальних захворювань жіночих статевих органів.

Результати. У жінок старшого репродуктивного віку протягом гестаційного періоду вагітність достовірно найчастіше ускладнюється гестозом (40.0-46,7%), загрозою переривання вагітності (36.7-5.0%), передчасні пологи (26.7-33.3%). При пологах цього контингенту жінок частіше відзначається слабкість пологової діяльності (10.0-13.3%).

Результати дослідження показують, що у жінок основної групи достовірно частіше вагітності закінчувалися мимовільними абортами – 9 (30%), достовірно вищою була кількість оперативних пологів – 4 (13.3%), у групі порівняння таких жінок 9 (30%) та 2 (6.7%) відповідно. Основними скаргами при попередніх вагітностях були болі в ділянці нирок і внизу живота – 53.3% і 46.6% серед вагітних основної групи та групи порівняння відповідно.

Висновки. У вагітних у віці 35 років і старше вкрай несприятливий фон з боку акушерсько-гінекологічного анамнезу та частота абдомінальних пологів у 2,5-3 рази вища, ніж у контрольній групі. Вагітність у пацієнток 35 років і старше слід класифікувати як патологічну вже у прегравідарному періоді.

Ключові слова: вагітність, результат пологів, старший репродуктивний вік, жінки, ускладнення, кесарів розтин.

ORCID and contributionship:

Raya Bulud Safarova : 0000-0001-7925-5871 ^{A,B,C,D,E,F}

A – Work concept and design, B – Data collection and analysis,
C – Responsibility for statistical analysis, D – Writing the article,
E – Critical review, F – Final approval of the article

CORRESPONDING AUTHOR

Raya Bulud Safarova

Azerbaijan Medical University

Obstetrics and Gynecology I Department

14, Anvar Gasimzada Str., Baku AZ1022, Azerbaijan Republic.

e-mail: rrayaaa@mail.ru

The authors of this study confirm that the research and publication of the results were not associated with any conflicts regarding commercial or financial relations, relations with organizations and/or individuals who may have been related to the study, and interrelations of coauthors of the article.

Стаття надійшла 06.12.2021 р.

Рекомендована до друку на засіданні редакційної колегії після рецензування