

# Obstetrical and perinatal consequences of birth in women depending on the term of gestation

V. G. Siusiuka<sup>1</sup>, N. Yu. Boguslavskaya<sup>2</sup>, O. D. Kyrylyuk<sup>2</sup>, A. O. Shevchenko<sup>1</sup>, O. V. Babinchuk<sup>2</sup>, O. I. Bachurina<sup>2</sup>, L. V. Kyrychenko<sup>2</sup>

<sup>1</sup>Zaporizhzhia State Medical University

<sup>2</sup>MNE «Regional Perinatal Center» ZRC

**The objective:** to analyze peculiarities of pregnancy course, childbirth and the condition of newborns in women, depending on the gestation period on the basis of clinical and statistical analysis.

**Materials and methods.** An analysis of pregnancy course, childbirth and perinatal outcomes has been carried out in 137 pregnant women. Patients were divided into 2 groups depending on the gestational age: 41 patients (I group) delivered in 37–40 weeks of gestation and 96 patients (II group) – in 41–42 weeks of pregnancy. Functional assessment of the fetal condition was performed using a cardiotocographic examination with cardiomonitors «Oxford Team 8000» and Hewlett Packard according to the generally accepted method, ultrasound examination – by ultrasound machine «Biomedica Au-530» with a linear sensor of 3.5 MHz frequency. Variational and statistical processing of the results has been carried out using licensed standard packages of multivariate statistical analysis application programs «STATISTICA 13».

**Results.** An evaluation of anamnestic data allowed to establish that the majority of patients in the II group (53.13 %) had extragenital pathology that was in 2 times more than in the I group (24.39 %). The frequency of chronic salpingo-oophoritis was also significantly higher in the II group compared to the I one (12.50 % and 2.44 %, respectively), and such pathology as uterine leiomyoma (7.29 %) and cervical dysplasia (4.17 %) were diagnosed only among the women in the II group.

A higher rate of pregnancy loss, anemia during pregnancy and disorders of uteroplacental bloodflow in patients in the II group was determined. The frequency of obstetric complications in the II group was in 4 times higher compared to the I group. This had a direct impact on the increase in the rate of cesarean section and vacuum extraction of fetus. Thus, fetal distress during childbirth was diagnosed in 13.54 % of women in the II group and in 7.32 % in the I group, and the weakness of labor activity (8,3 %) and clinically contracted pelvis (5.21 %) were determined only in the II group.

Trauma of the birth canal was found in 37.5 % of women in the II group, which was almost 4 times higher than in the group I (9.76 %). The frequency of postpartum bleeding was also higher in the group II (15.6 %) and exceeded the indicator in the I group (4.88 %) in 3 times.

The signs of prolonged pregnancy were found in 7.32 % newborns in the I group and 13.54 % – in the II group. It should be noted that the clinical features of early adaptation, which are characterized by a low Apgar score at birth, as well as higher morbidity, including high frequency of damage to the nervous system were determined in the newborns in the II group.

**Conclusions.** Results of the study indicate the importance of constitutional and age characteristics, as well as concomitant somatic pathology and genital inflammatory diseases in women with a delivery date of 41–42 weeks of pregnancy, which can increase the probability of postterm pregnancy in these women. According to the results of the comparative analysis in the research groups, depending on the date of delivery, the predominance of obstetric and perinatal complications was established in women who delivered at 41–42 weeks of pregnancy compared to women who had labor at 37–40 weeks.

A high rate of obstetric complications (anomalies of uterine activity in labor, fetal distress, clinically contracted pelvis) had a direct impact on the increase in a percentage of operative delivery (vacuum extraction of a fetus and caesarean sections). Babies born at 41–42 weeks had clinical features of early adaptation, characterized by a low Apgar score, higher morbidity and frequent damage of the nervous system compared to newborns with gestation period of 37–40 weeks.

**Keywords:** pregnancy, gestation period, prolonged pregnancy, obstetric and perinatal complications, operative delivery.

## Акушерські та перинатальні наслідки розродження жінок залежно від терміну гестації

V. G. Siusiuka, N. Yu. Boguslavskaya, O. D. Kyrylyuk, A. O. Shevchenko, O. V. Babinchuk, O. I. Bachurina, L. V. Kyrychenko

**Мета дослідження:** аналіз особливостей перебігу вагітності, пологів та стану новонароджених у жінок залежно від терміну гестації на підставі клініко-статистичного аналізу.

**Матеріали та методи.** Проведено аналіз особливостей перебігу вагітності, пологів і перинатальних наслідків розродження 137 вагітних, які розподілені на дві групи: 41 пацієнтка (I група) – розроджені у терміні гестації 37–40 тиж та 96 пацієнток (II група) – розроджені у терміні гестації 41–42 тиж вагітності.

Функціональне оцінювання стану плода проводили з використанням кардіотокографічного дослідження на кардіомоніторі «OxfordTeam 8000» і HewlettPackard за загальноприйнятою методикою, а також ультразвукового дослідження на апараті «Biomedica Au-530» з використанням лінійного датчика з частотою 3,5 МГц. Варіаційно-статистичне оброблення результатів здійснювали з використанням ліцензованих стандартних пакетів прикладних програм багатовимірною статистичного аналізу «STATISTICA 13».

**Результати.** Оцінювання анамнестичних даних у групах дослідження дозволило встановити, що частота екстрагенітальної патології серед пацієнток II групи становила 53,13 % та була у 2 рази вищою, ніж у I групі (24,39 %). Частота хронічного сальпінгофориту також була значно вищою у II групі порівняно з I групою (12,50 % і 2,44 % відповідно), а така патологія, як лейоміома матки (7,29 %) та дисплазія шийки матки (4,17 %), спостерігалася лише серед жінок II групи. Привертає на себе увагу більш висока частота невиношування, анемії під час вагітності та порушення матково-плацентарного кровотоку серед пацієнток II групи. Частота ускладнень перебігу пологів у II групі була у 4 рази вищою порівняно з I групою. Це мало безпосередній вплив на зростання частоти кесарева розтину та вакуум-екстракції плода. Так, дистрес плода під час пологів діагностовано у 13,54 % жінок у II групі та у 7,32 % – у I групі, а слабкість пологової діяльності (8,3 %) та клінічно вузький таз (5,21 %) виявляли лише у II групі.

У 37,5% випадків спостерігалася травма пологових шляхів серед жінок II групи, що майже у 4 рази перевищувало відповідний показник I групи (9,76 %). Частота післяпологової кровотечі також була вищою у II групі (15,63 %) та у 3 рази перевищувала показник у I групі (4,88 %).

У 7,32 % новонароджених I групи та 13,54 % – II групи були виявлені характерні ознаки переносування. Слід зазначити, що у II групі новонароджені мали клінічні особливості ранньої адаптації, які характеризуються низькою оцінкою за шкалою Апгар при народженні, а також більш високою захворюваністю, зокрема високою частотою ураження нервової системи.

**Висновки.** Результати проведеного дослідження свідчать про значення конституційних і вікових особливостей, а також супутньої соматичної патології та генітальних запальних захворювань у жінок з терміном розродження 41–42 тиж вагітності, що може збільшити ймовірність переносування у даного контингенту. За результатами порівняльного аналізу у групах дослідження залежно від терміну розродження встановлено переважання акушерських та перинатальних ускладнень у жінок, розроджених у терміні 41–42 тиж вагітності, порівняно з жінками, пологи у яких відбулись у 37–40 тиж.

Висока частота акушерських ускладнень (аномалії пологової діяльності, дистрес плода, клінічно вузький таз) мала безпосередній вплив на збільшення відсотка оперативного розродження (вакуум-екстракція плода і кесарів розтин). Немовлята, народжені жінками у термін 41–42 тиж, мають клінічні особливості ранньої адаптації, що характеризуються низькою оцінкою за шкалою Апгар, більш високою захворюваністю і частим ураженням нервової системи, порівняно з новонародженими жінок, термін розродження яких становив 37–40 тиж.

**Ключові слова:** вагітність, термін гестації, переносування вагітності, акушерські та перинатальні ускладнення, оперативне розродження.

Perinatal morbidity and mortality reach their lowest point at 37–41 birth weeks, increasing with the deviation of gestational age, both for premature and for full-term pregnancies. The risks of complications during childbirth increase also [1–4].

When gestational period reaches 37 weeks of pregnancy it is considered to be «full-term» [1]. Accordingly, spontaneous onset and progression of labor at 37–41+6 weeks of pregnancy in occipital presentation of the fetus is considered as a physiological (normal) birth, provided that its course occurred without complications during the entire period of childbirth, with a satisfactory condition of the mother and newborn after childbirth [5]. A prolonged pregnancy lasts more than 42 full weeks (from the first day of the last normal menstrual cycle) [6–10]. Therefore, today, in order to prevent prolonged pregnancy, it is advisable to be hospitalized at the 41st week, which provides an opportunity to conduct a timely examination of the condition of a fetus and determine the tactics of childbirth [11]. Up to 10 % of pregnancies last more than 294 days (42 weeks) according to the Cochrane meta-analysis [1].

In a systematic review of 15 million pregnancies in high-income countries, the risk of stillbirth increased with gestational age from 0.11 per 1,000 births at 37 weeks' gestation to 3.18 per 1,000 births at 42 weeks' gestation. The risk of neonatal death was almost twice as high in pregnancies that lasted more than 41 weeks compared to 38–41 weeks [12]. In a large retrospective cohort study in the United States that included 5.4 million pregnancies of low-risk women who delivered at 39 to 41 weeks, the overall risks of adverse neonatal outcomes (Apgar score less than 5 at 5 minutes, ancillary ventilation longer than 6 hours, neonatal convulsions or neonatal mortality), as well as an adverse maternal outcome (hospitalization to the intensive care unit, blood transfusion, uterine rupture, or unplanned hysterectomy) increased from 39 to 41 weeks [3].

Prolonged pregnancy is one of the problems in obstetrics of great scientific and practical interest [13]. The problem of delayed pregnancy and late childbirth is explained by a large percentage of complications during pregnancy, childbirth and in the postpartum period [7–10, 14]. In recent decades scientists have been constantly expanding their understanding of the metabolic aspects of the pathogenesis of prolonged pregnancy. Thus, it was established that a whole cascade of biochemical, genetic, and immunological processes is launched, which ultimately lead to the formation of this pathology [15]. A clear connection between the level of homocysteine in blood plasma and obstetric complications, including when carrying has been established. Today, the study of the level of homocysteine in blood plasma of women whose pregnancy is complicated by preeclampsia, premature birth, fetal growth retardation, and also during pregnancy is relevant [16].

The risk groups for carrying a pregnancy include: first-time pregnant women; women of early and late reproductive age; pregnant women who had a history of late childbirth; pregnant women with metabolic disorders detected before pregnancy; pregnant women with frequent infectious diseases in childhood; women with chronic diseases of the cardiovascular system and digestive tract; pregnant women with inflammatory diseases of the female genital organs and background diseases of the cervix [17].

Prolonged pregnancy is associated with adverse consequences for the offspring. It should also be noted about the long-term consequences for such children, namely disorders of nervous development. Neurodevelopmental disorders were intellectual disability, epilepsy, delayed psychomotor development, and cerebral palsy [18–21].

Violation of the placental functions against the background of pregnancy is one of the main causes of perinatal morbidity and mortality in pregnancy. At a

gestation period of more than 41 weeks, the condition of fetus is disturbed, the number of newborns with asphyxia increases, and the course of neonatal period worsens. Thus, timely diagnosis and forecasting of prolonged pregnancy is important for choosing terms and methods of delivery in order to improve perinatal outcomes [22].

**The objective:** to analyze peculiarities of pregnancy course, childbirth and the condition of newborns in women, depending on the gestation period on the basis of clinical and statistical analysis.

### MATERIALS AND METHODS

An analysis of pregnancy course characteristics, childbirth and perinatal consequences of childbirth has been carried out in 137 pregnant women. The study was carried out in the Zaporizhzhya Regional Perinatal Center of the Zaporizhzhya Regional Council. Patients were divided into 2 groups depending on the gestational age: Group I included 41 patients (births at 37-40 weeks of gestation), Group II – 96 patients (births at 41-42 weeks of pregnancy). The average age of pregnant women in the group I was 27.19±0.48 years, and in the group II – 27.54±0.75 years (p 0.05).

Functional assessment of the fetal condition was performed using a cardiotocographic study on the «Oxford Team 8000» and Hewlett Packard card iomonitor according to the generally accepted method, as well as an ultrasound study on the «Biomedica Au-530» device using a linear sensor with a frequency of 3.5 MHz.

Each pregnant woman was interviewed about the expediency of additional research methods and consent to the implementation has been obtained. The research meets the modern requirements of moral and ethical norms regarding the rules of ICH/GCP, the Declaration of Helsinki (1964), the Conference of the Council of European Human Rights and Biomedicine, as well as the provisions of legislative acts of Ukraine.

Variational and statistical processing of the results has been carried out using licensed standard packages of multivariate statistic analysis application programs «STATISTICA 13».

### RESULTS AND THEIR DISCUSSION

Evaluation of anamnestic data allowed to establish that the vast majority of patients in the II group (53.13 %) had extragenital pathology (EGP). The corresponding indicator in the group I was 2 times lower and amounted to 24.39 %. In the structure of concomitant pathology of the groups I and II, alimentary and constitutional obesity (9.76 % and 21.88 %, respectively; p<0.05) and chronic pyelonephritis (2.44 % and 7.29 %, respectively) prevailed.

During the analysis of menstrual function in women of the II group, it was found that 10 patients (10.4 %) had a later onset of menstruation, menstrual cycle disorders in 45 (46.88 %). Among pregnant women of the I group, similar indicators were 3 (7.3 %) and 16 (39.02 %) respectively.

Among gynecological pathologies, ectopy of cylindrical epithelium was the most common in anamnesis, namely in 42 % of patients in group I and in 39.0 % in group II. Chronic salpingo-oophoritis (2.44 %

and 12.50 %, respectively) and ovarian cyst (7.32 % and 4.17 %, respectively) occurred among the diseases of other pathology, both in I and II groups. Pathologies such as uterine leiomyoma (7.29 %) and cervical dysplasia (4.17 %) were found only in pregnant women of the II group.

When characterizing the study groups parity, it should be noted that there were significantly more primigravida women in the II group (table 1).

The structure of pregnancy complications is presented in table 2.

Clinically significant differences were observed in the study groups regarding the features of pregnancy course. It should be noted that the course of this pregnancy in most patients of the II group was complicated. Thus, the frequency of threat of termination was 24.39 % among pregnant women in group I and 30.21 % in group II. However, the course of pregnancy was complicated by the threat of premature birth only in the II group and amounted to 18.75 %.

The highest frequency of pregnancy complications was in the II group. Pregnant women of the II group had asymptomatic bacteriuria – 2 cases (2.1 %), gestational pyelonephritis – 5 cases (5.21 %) and colpitis – 9 (9.4 %). Acute respiratory infectious diseases were observed in 5 (5.21 %) patients during pregnancy. Among patients of group I, 3 (7.3 %) were diagnosed with colpitis and 2 (4.9 %) with acute respiratory infectious diseases.

Table 1

#### Characteristics of pregnancy parity in study groups (abs., %)

Indicator	I group, n=41	II group, n=96
Primigravidas	6 (14,63)	59 (61,46) *
Multigravidas	35 (85,37)	37 (38,54) *
Primiparous	26 (63,41)	73 (76,04)
Multiparous	15 (36,59)	23 (23,96)

Notes: \* – level of significance of differences between groups (p<0,05).

Table 2

#### The frequency of pregnancy complications in the study groups (abs., %)

Complications	I group, n=41	II group, n=96
Anemia during pregnancy	1 (2,44)	26 (27,08) *
Threat of termination	10 (24,39)	29 (30,21)
Cervical incompetence	-	3 (3,13)
Threat of premature birth	-	18 (18,75) *
Oligohydramnios	2 (4,88)	7 (7,29)
Polyhydramnios	4 (9,76)	12 (12,5)
Early toxicosis	4 (9,76)	21 (21,88)
Moderate preeclampsia	-	1 (1,04)
Fetal growth retardation	1 (2,44)	4 (4,17)
Violation of uteroplacental bloodflow	7 (17,07)	38 (39,58) *

Notes: \* – level of significance of differences between groups (p<0,05).

According to the ultrasound examination, among pregnant women of II group the III degree of maturity of the placenta was found to be 22.92 %. Corresponding signs occurred only in 3 (7.32 %) patients from the group I. Based on the data presented in table 3, it can be noted that in the group II, a significant percentage of pregnant women (45.83 %) had one or another ultrasound signs of prolonged pregnancy, while in the group I, the total number of women with the corresponding signs was 14.63 %.

It should be mentioned that according to the results, the assessment of the degree of maturity of cervix in the majority of pregnant women (58.5 %) from the I group was «immature» or «insufficiently mature», while in 71.9 % of the II group it was «mature». In the vast majority of patients of both group I (97.56 %) and group II (86 pregnant women – 89.58 %), spontaneous childbirth occurred through natural birth canal (table 4).

6.25 % of women of the II group and 2.44 % of the I group gave birth by caesarean section (as planned). In the II group, 4 women (4.17 %) were urgently operated on. The most frequent indication for cesarean delivery was fetal distress. Frequency of childbirth complications in the group II was 58.33 % and was 4 times higher than in the group I (14.63 %), which had a direct impact on the increase in the frequency of cesarean sections and vacuum extraction of the fetus in the group II (table 5).

Premature rupture of fetal membranes occurred in 6.25 % of cases in the II group and 4.88% in the I group. Weakness of labor activity was diagnosed in 8.3 % of cases only in the II group. Also, only the II group patients have had a clinically narrow pelvis (5.21 %), the cause of which was macrosomia with normal pelvic dimensions. Thus, among complications, fetal distress during childbirth should be marked, the frequency of which was 13.54 % among women in the II group and 7.32 % – in the I group.

In 37.5 % of cases, trauma of the birth canal was observed among women of the II group, which was almost 4 times higher than the corresponding indicator in the I group (9.76 %). As a result, there was an increase in the volume of bloodloss during childbirth and an increase in the length of stay at the Perinatal Center. It should be noted that the frequency of postpartum bleeding in the II group (15.6 %) was 3 times higher than in the I group (4.88 %).

For the purpose of an analgesia during childbirth, epidural analgesia was used in 26.83 % of women in group I, narcotic analgesics in 12.9 %, and antispasmodics and non-narcotic analgesics in 60.98 %. Among women of the II group, spasmolytics and non-narcotic analgesics were used (52.08 %) most of ten and epidural analgesia was used for every third patient (33.33 %). The frequency of use of narcotic analgesics in both groups was almost the same.

Characterizing the condition at birth and in the early neonatal period, no statistically significant differences regarding gender characteristics and average values of anthropometric indicators ( $p > 0.05$ ) were found.

Given the fact that part of the values of premature newborns' body weight can be leveled by a larger fetus, which is also a deviation, table 6 presents the parameters by gradations of newborns weight (step 500 g).

As it follows from the indicated data, there are differences in the quantitative characteristics, namely, in the absence

Table 3

**Results of ultrasound scanning in the study groups (abs., %)**

Parameters	I group, n=41	II group, n=96
Monosymptomaticity		
Signs of placenta aging	3 (7,32)	22 (22,92) *
Multiple petrificates	-	1 (1,04)
Oligohydramnios	1 (2,44)	2 (2,08)
Polysymptomaticity		
Signs of aging of the placenta, petrificates	1 (2,44)	4 (4,17)
Signs of aging of the placenta, oligohydramnios	-	14 (14,58) *
Signs of aging of the placenta, oligohydramnios, petrificates	1 (2,44)	1 (1,04)

Notes: \* – level of significance of differences between groups ( $p < 0,05$ ).

Table 4

**Method of delivery in research groups (abs., %)**

Method of delivery	I group, n=41	II group, n=96
Through natural birth canal	40 (97,56)	76 (79,17) *
Pathological (with vacuum extraction, manual examination of the uterine cavity)	-	10 (10,42) *
Planned caesarean section	1 (2,44)	6 (6,25)
Urgent caesarean section	-	4 (4,17) *

Notes: \* – level of significance of differences between groups ( $p < 0,05$ ).

Table 5

**Characteristics of childbirth course in the study groups (abs., %)**

Complications	I group, n=41	II group, n=96
Premature rupture of fetus membranes	2 (4,88)	6 (6,25)
Primary weakness of labor activity	-	6 (6,25) *
Secondary weakness of labor activity	-	2 (2,08)
Fetal distress	3 (7,32)	13 (13,54) *
Clinically narrow pelvis	-	5 (5,21)
Birth traumatism on the part of the mother	4 (9,76)	36 (37,5) *
Postpartum bleeding	2 (4,88)	15 (15,63) *

Notes: \* – level of significance of differences between groups ( $p < 0,05$ ).

Table 6

**Clustering of newborns' body weight in the study groups (abs., %)**

Body weight of newborns, points	I group, n=41	II group, n=96
< 3000 g	5 (12,2)	10 (10,42)
3000–3499 g	13 (31,71)	32 (33,33)
3500–3999 g	19 (46,34)	28 (29,17) *
4000–4499 g	4 (9,76)	22 (22,92) *
> 4500 g	-	4 (4,17)

Notes: \* – level of significance of differences between groups ( $p < 0,05$ ).

*Table 7*  
**Indicators of assessment of newborns according to the Apgar scale in research groups (M±m, points)**

Minutes	I group, n=41	II group, n=96
1 minute	7,71±0,18	7,45±0,12
5 minute	8,61±0,14	8,38±0,09 *

Notes: \* – level of significance of differences between groups (p<0,05).

of differences in body weight between the averages of the groups, it is significantly more common for the group II, according to the  $\chi^2$  criterion ( $\chi^2=6.4$  at  $p<0.05$ ) and the data of conjugation tables there were newborns with a body weight of more than 3500 g. It should be noted that the frequency of births of children weighing up to 3000 g and more did not reliably differ between both groups. It is important to mention that the presence of macrosomia (more than 4000 g) was 2.8 times more frequent in the group II compared to the group I, which was 27.08 % and 9.76 %, respectively.

At birth, the clinical condition of newborns was assessed according to the Apgar scale, the average values are presented in table 7. Infants of patients in the group had II a lower average score both at the 1st and 5th minutes.

Most of the children were born in a satisfactory condition. In group I, 34.15 % and 56.86 % in group II were healthy, the rest had various abnormalities (table 8). However, the newborns in the II group had clinical features of early adaptation, which are characterized by a low score on the Apgar scale at birth, as well as a higher morbidity including high frequency of damage to the nervous system.

According to these data characteristic signs of prolonged pregnancy were found (absence of cheesy lubricant, dryness and flaking of the skin, decreased skin turgor, dense skull bones, narrow seams and fontanelle) during the examination of newborns in the group I (7.32 %) and in the group II (13.54 %).

This clinical study has shown that an EGP has taken place in the majority of women who have given birth in

41–42 weeks of pregnancy (Group II). In particular, the predominance of alimentary-constitutional obesity and chronic pyelonephritis was established compared to women who have given birth in period of 37–40 weeks of gestation (Group I). Such results are consistent with other researchers [17, 23–25]. In structure of pregnancy complications in women of group II, anemia, a threat of termination of pregnancy and a threat of premature birth prevailed. In group II the incidence of uterine-placental blood flow was more than 2 times higher than in the group I. Premature aging of the placenta can contribute to its dysfunction [26, 27].

Disorders of formation of the placenta, uterine-placental circulation can cause premature termination of pregnancy, placental dysfunction, fetal growth retardation, etc. [28]. As it is known, in prolonged pregnancy two main pathogenetic links of distress development are potentiated, namely, the maturity of fetal brain structures and morphofunctional involutory changes in the placenta [17]. An additional mechanism of placental disorders can be changes in the hemostasis system, therefore, by examining the relevant indicators, we can identify a risk group for the development of disorders in the mother-placenta-fetus system and hypertensive disorders in both women with normal and post-term deliveries. During pregnancy, changes in the hemostasiogram occur in the direction of hypercoagulation and insufficient anticoagulants in the presence of activation of procoagulant factors [29].

Therefore, the prevention of obstetric and perinatal pathology in pregnant women with various risk factors is a priority area. To date, the effectiveness of developed and implemented technologies, both prevention and treatment, have been proven by numerous studies [30–36].

Also, a high frequency of complications of childbirth in group II, which was 58.33 % and was 4 times higher in comparison with the results we have got in the group I (14.63 %) – this had a direct impact on increase in the frequency of operative delivery in Group II. Among complications weakness of labor, fetal distress and traumatism during childbirth should be noted. Such results are consis-

**Pathological conditions of newborns in the study groups (abs., %)**

*Table 8*

Diagnosis	I group, n=41	II group, n=96
Intrauterine pneumonia	1 (2,44)	0 (0)
Congenital malformations	0 (0)	3 (3,13) *
Intrauterine infection (High risk group)	2 (4,88)	8 (8,33) *
Haemolytic disease of newborns according to ABO system	3 (7,32)	0 (0)
Hydrocele	0 (0)	1 (1,04)
Hypoxic-ischemic encephalopathy	2 (4,88)	3 (3,13)
Fetal growth retardation	1 (2,44)	3 (3,13)
Transient jaundice	14 (34,15)	28 (29,17)
Clavicle fracture	1 (2,44)	1 (1,04)
Signs of prolonged pregnancy	3 (7,32%)	13 (13,54%) *
Respiratory depression in childbirth	0 (0%)	1 (1,04%)
Damage to the nervous system	0 (0%)	8 (8,33%) *

Notes: \* – level of significance of differences between groups (p<0,05).

tent with other researchers [37]. Regarding the condition of newborns, they have had clinical features of early adaptation in group II, as well as a higher rate of morbidity, including high frequency of nervous system damage.

Mother and child health care is the main task of medical science and practice. Successes in its solution are related to the development of modern effective methods of diagnosis, forecasting and prevention of gestation complications [38]. Therefore, the presence of a high rate of obstetric and perinatal pathology among women who have given birth at 41–42 weeks of pregnancy (Group II) compared to women in delivery period of 37–40 weeks of gestation (Group I) indicates the need for timely diagnosis and treatment and preventive measures, as well as the choice of a rational method of delivery for such contingent of women.

### CONCLUSIONS

1. Results of conducted research indicate the importance of constitutional and age characteristics, as well as

concomitant somatic pathology and genital inflammatory diseases in women with a delivery date of 41–42 weeks of pregnancy, which can increase the probability of prolonged gestation in this contingent of women.

2. According to the results of the comparative analysis in the research groups, depending on the date of delivery, the predominance of obstetric and perinatal complications was established in women who have been delivered at 41–42 weeks of pregnancy compared to women who have given birth at 37–40 weeks.

3. A high frequency of obstetric complications (anomalies of labor, fetal distress, clinically narrow pelvis) had a direct impact on the increase in a percentage of operative delivery (vacuum extraction of a fetus and caesarean sections).

4. Babies born to women at 41–42 weeks have had clinical features of early adaptation, characterized by a low Apgar score, higher morbidity and frequent damage to the nervous system compared to newborns whose gestation period was 37–40 weeks.

### Information about the authors

**Siusiuka Volodymyr G.** – MD, PhD, DSc, Associate Professor, Department of Obstetrics and Gynecology, Zaporizhzhia State Medical University. *E-mail: svg.zp.ua@gmail.com*

ORCID: 0000-0002-3183-4556

**Bohuslavska Nataliia Yu.** – MD, PhD, Director's Assistant, Municipal non-profit enterprise «Regional Perinatal Center» of the Zaporizhzhia Regional Council. *E-mail: bohuslavska@i.ua*

ORCID: 0000-0001-5401-3999

**Kyryliuk Oleksandr D.** – MD, PhD, Director of the Municipal non-profit enterprise «Regional Perinatal Center» of the Zaporizhzhia regional council. *E-mail: rdom5@i.ua*

ORCID: 0000-0002-0173-5661

**Shevchenko Anna O.** – MD, PhD, Assistant of Professor, Department of Obstetrics and Gynecology, Zaporizhzhia State Medical University. *E-mail: shevchenkoaa0202@gmail.com*

ORCID: 0000-0002-7883-2873

**Babinchuk Olena V.** – MD, PhD, Head of the Maternity Ward, Municipal non-profit enterprise «Regional Perinatal Center» of the Zaporizhzhia regional council. *E-mail: babinchukev@gmail.com*

ORCID: 0000-0002-2774-1162

**Bachurina Oksana I.** – MD, Head of the Consultative and Diagnostic Department, Municipal non-profit enterprise «Regional Perinatal Center» of the Zaporizhzhia regional council. *E-mail: o.bachyrina@gmail.com*

ORCID: 0000-0001-8206-550X

**Kyrychenko Liudmyla V.** – MD, Head of the Department of Pathology of Early Pregnancy and Extragenital Pathology, Municipal non-profit enterprise «Regional Perinatal Center» of the Zaporizhzhia regional council. *E-mail: rdom5@i.ua*

ORCID: 0000-0002-4644-8922

### Відомості про авторів

**Сюсюка Володимир Григорович** – д-р мед. наук, доцент, кафедра акушерства і гінекології, Запорізький державний медичний університет. *E-mail: svg.zp.ua@gmail.com*

ORCID: 0000-0002-3183-4556

**Богуславська Наталія Юрївна** – канд. мед. наук, заступниця директора, комунальне некомерційне підприємство «Обласний перинатальний центр», Запорізька обласна рада. *E-mail: bohuslavska@i.ua*

ORCID: 0000-0001-5401-3999

**Кирилюк Олександр Дмитрович** – канд. мед. наук, директор, комунальне некомерційне підприємство «Обласний перинатальний центр», Запорізька обласна рада. *E-mail: rdom5@i.ua*

ORCID: 0000-0002-0173-5661

**Шевченко Анна Олександрівна** – канд. мед. наук, асистентка, кафедра акушерства і гінекології, Запорізький державний медичний університет. *E-mail: shevchenkoaa0202@gmail.com*

ORCID: 0000-0002-7883-2873

**Бабінчук Олена Василівна** – канд. мед. наук, завідувачка, пологове відділення, комунальне некомерційне підприємство «Обласний перинатальний центр», Запорізька обласна рада. *E-mail: babinchukev@gmail.com*

ORCID: 0000-0002-2774-1162

**Бачуріна Оксана Іванівна** – завідувачка, консультативно-діагностичне відділення, комунальне некомерційне підприємство «Обласний перинатальний центр», Запорізька обласна рада. *E-mail: o.bachyrina@gmail.com*

ORCID: 0000-0001-8206-550X

**Кириченко Людмила Віталіївна** – завідувачка, відділення патології раннього терміну вагітності та екстрагенітальної патології, комунальне некомерційне підприємство «Обласний перинатальний центр», Запорізька обласна рада. *E-mail: rdom5@i.ua*

ORCID: 0000-0002-4644-8922

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