AMERICAN ACADEMIC PUBLISHER

INTERNATIONAL JOURNAL OF MEDICAL SCIENCES

ISSN NUMBER: 2692 - 5206 Volume 5,October ,2025

UDC: 618.39-07:616-036.21

DETERMINING THE MAIN RISK FACTORS FOR PRETURN BIRTH

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ABSTRACT: In this article, to determine the main risk factors for the birth of premature babies, data from the developmental history of 66 premature babies (form No. 097/u), as well as birth histories (form No. 096/u), were analyzed. Simultaneously, women's social, somatic, and obstetric-gynecological history data were analyzed, and the significance of various forms of obstetric-gynecological pathology that complicated the course of this pregnancy was also identified. It has been proven that various forms of obstetric and gynecological pathology in women, the threat of termination of pregnancy, fetal envelopment by the umbilical cord, maternal body mass index, residence in the city and region have a significant impact on the birth of a child at 34-36 weeks.
Key words: late premature birth; risk factors; newborn; late premature birth.

CHAQALOQLARNI CHALA TUG‘ILISHINING XAVF OMILLARINI ANIQLASH

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ANNOTATSIYA. Ushbu maqolada kech muddatdan oldin tug‘ilgan chaqaloqlar tug‘ilishining asosiy xavf omillarini aniqlash uchun, muddatidan oldin tug‘ilgan 66 nafar kech tug‘ilgan chaqaloqlarning rivojlanish tarixi (shakl № 097/x), shuningdek tug‘ruq tarixi (shakl № 096/x) ma’lumotlari tahlil qilingan. Ayollarning ijtimoiy, somatik, akusherlik-ginekologik anamnezi ma’lumotlari bir vaqtning o‘zida tahlil qilindi, shuningdek, ushbu homiladorlikning kechishini murakkablashtirgan akusherlik va ginekologik patologiyaning turli shakllarining ahamiyati aniqlandi. 34-36 haftalik muddatda chaqaloq tug‘ilishiga ayollar akusher-ginekologik patologiyasining turli shakllari, homila tushish xavfi, homilaning kindik bilan o‘ralib qolishi, onaning tana vazni indeksi, shahar va viloyatda yashashi kabi omillar sezilarli ta’sir ko‘rsatishi isbotlangan.
Tayanch iboralar: kech muddatdan oldin tug‘ilgan chaqaloq; xavf omillari; yangi tug‘ilgan chaqaloq.

ОПРЕДЕЛЕНИЕ ОСНОВНЫХ ФАКТОРОВ РИСКА РОЖДЕНИЯ НЕДОНОШЕННЫХ ДЕТЕЙ

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AMERICAN ACADEMIC PUBLISHER

INTERNATIONAL JOURNAL OF MEDICAL SCIENCES

ISSN NUMBER: 2692 - 5206 Volume 5,October ,2025

АННОТАЦИЯ. В данной статье для определения основных факторов риска рождения недоношенных детей проанализированы данные истории развития 66 недоношенных детей (форма № 097/у), а также истории родов (форма № 096/у). Одновременно были проанализированы данные социального, соматического, акушерско-гинекологического анамнеза женщин, а также выявлена значимость различных форм акушерско-гинекологической патологии, осложнявших течение данной беременности. Доказано, что различные формы акушерско-гинекологической патологии у женщин, угроза прерывания беременности, обволакивание плода пуповиной, индекс массы тела матери, проживание в городе и области оказывают существенное влияние на рождение ребенка в 34-36 недель.
Ключевые слова: поздний недоношенный ребёнок; факторы риска; новорождённый; поздние преждевременные роды.

INTRODUCTION

Babies born between 34 0/7 weeks and 36 6/7 weeks (referred to as late term infants) present a specific problem for doctors, as well as hospital and community health systems [1-3]. Babies born between 34 0/7 weeks and 36 6/7 weeks (referred to as late term infants) present a specific problem for doctors, as well as hospital and community health systems [1-3]. Early birth rates have been growing continuously in recent years: according to official statistics, their number was 69.4% in 2023 and 72.8% in 2024. In this regard, the need arises to identify the main factors that lead to premature labor. Factors such as pregnancy-induced arterial hypertension, placenta lying in front, eclampsia, cervical length and fetal growth, and a woman taking antibacterial and hypotensive drugs played a leading role in the birth of a premature baby actors such as pregnancy-induced arterial hypertension, placenta lying in front, eclampsia, cervical length and fetal growth, and a woman taking antibacterial and hypotensive drugs played a leading role in the birth of a premature baby. Mental state of a pregnant woman, excessive physical exertion [3-6], as well as multiple fetal pregnancy, urogenital infections, departure of prenatal amniotic fluid, risk of termination of pregnancy in early periods [7-9]. However, not only somatic and obstetric-gynecological factors are important, but also social ones. It has been found that East Asian women are more likely to give birth before the late deadline, while African women are more likely to give birth before the deadline [10]. Women who have completed a previous pregnancy prematurely are 4-5 times more likely to have a recurrent prematurity [4-11]. The purpose of the study is premature babies (gestational age 34 0/7-36 6/7 week) consists in determining the main risk factors for childbirth.

MATERIALS AND METHODS

The data of the developmental history (form No. 097/x), as well as the birth history (form No. 096/x) of 66 live births from 34 0/7 weeks to 36 6/7 weeks of gestation, were analyzed. One of the stages of the work was the calculation of the woman's body mass index (BMI). This is a quantity that allows us to assess the degree of correspondence between a person's weight and height [1,2,5,6,7]. Body weight (kg) /height2 (m) is calculated using the formula. Data analysis was carried out using the programs "StatTech 3.1.10," "Microsoft Office Excel 2016" using dispersion analysis (ANOVA).

RESULTS

Analysis of the data obtained showed that the age of the mother at the birth of a late premature baby was 32.9±5.67 years, the median age of the father was 30.8±7.25 years, while the

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 5,October ,2025

proportion of the city's population among pregnant women was 64.6%. 54.7% of mothers and 45% of fathers have higher education (Table 1).

Table-1

Social history description

Indicator	Frequency, %
Urban population	64.8
Suburban residents	34.3
Higher education (fathers)	45.0
Secondary education (fathers)	53.4
Partial secondary education (fathers)	4.8
Higher education (mothers)	54.7
Secondary education (mothers)	43.8

Among the conditions complicating the course of pregnancy, other placental disorders caused by pregnancy (64.2%), edema (42.5%), and preterm rupture of membranes (39.5%) were more common. Almost every third woman had a risk of miscarriage (33.2%) and mainly mild anemia (31.4%) was noted. In every fourth case, gestational diabetes mellitus was registered (25.4%) (Table 2).

Complicated somatic history was revealed in more than 70% of women. In its composition, disorders of the autonomic nervous system prevailed, which were noted in every 4th woman. Visual impairment was noted in 22.4% of cases, chronic urinary tract infection - in 15.9%, gastrointestinal tract diseases - in 13.9%, thyroid gland dysfunction - in 8.6% of cases (Table 3).

Complicated obstetric and gynecological history was observed in 68.5% of women. Of these, 15.4% of pregnant women had a postoperative uterine scar. Every 10th woman had a history of medical or spontaneous abortion. In 9.1% of cases, there was pregnancy termination and insufficient fetal growth during pregnancy.

An analysis of the effects of various risk factors on gestational age of infants born before the evening period found that the risk of miscarriage ($p = 0.016$) and the presence of umbilical cord wrap ($p = 0.020$) increased the risk of having a baby during gestational age of 34 weeks. n analysis of the effects of various risk factors on gestational age of infants born before the evening period found that the risk of miscarriage ($p = 0.016$) and the presence of umbilical cord wrap ($p = 0.020$) increased the risk of having a baby during gestational age of 34 weeks. Women in the village have a 2.66-fold higher risk of having a child in Week 36 of pregnancy ($p = 0.007$; OSH = 0.376; 95% CI 0.184-0.771), while urban living of women leads to a 1-Week increase in pregnancy duration ($p = 0.045$; 95% CI 1,011-4,318).

Table 2

Complications of current pregnancy in women

Complications of current pregnancy	Frequency, %
Other placental disorders	64.2
Edema due to pregnancy	42.5
Early rupture of membranes	39.5
Risk of miscarriage	33.2
Anemia complicating pregnancy, childbirth and the puerperium	31.4
Vulvovaginitis of various etiologies (including ureaplasma, chlamydia and	28.4

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 5,October ,2025

mycoplasma)	
Gestational diabetes mellitus	25.4
Childbirth complicated by fetal heart rate change	14,8
Gestational hypertension with pronounced proteinuria	16.0
Acute upper respiratory tract infection NOS	13.1
Asymptomatic bacteriuria in pregnant women	11.1

These data indicate the further convenience and timely provision of qualified medical care in urban conditions.

At the same time, we found a significant negative correlation between the timing of delivery of a premature newborn at 36 weeks of gestation and disorders of the autonomic nervous system in women (p = -0.013). In the group with this risk factor, the chances were 2.95 times lower (OSH = 0.339; 95% CI 0.141-0.814).

This may be due to the timely elimination of the influence of unfavorable risk factors that contributed to the prolongation of actual pregnancy. Analysis of BMI values in pregnant women revealed significant fluctuations (Table 1). With the help of ROC-analysis, the dependence of 0/7-36 6/7 weeks on the body mass index of premature newborns was determined.

The probability of a child being born at this age was higher with values of BMI > 23 kg/m2 and < 28 kg/m2. At the same time, the lowest risk of premature birth is observed when the BMI is less than 22.5 kg/m2 [12], and the timing of premature birth is inversely related to the amount of BMI, and premature birth of a child is predicted when the BMI is > 30 kg/m2 [13].

ROC analysis was also used to determine the influence of birth parity on the probability of preterm births, and the mode for the array of values was calculated. Both methods showed that premature infants were born mainly from the 1st pregnancy and the 1st delivery. The probability of childbirth at 0/7-36 6/7 weeks of gestation, such factors increased female infertility (p = 0.036) by 4.11 times (95% CI 1.063-15.905) and other non-inflammatory diseases of the uterus: fibroadenoma, uterine fibroadenoma (p = 0.007) by 17.52 times (95% CI 0.967-317.361).

Table 3

Somatic forms of pathology in women

Form of pathology in women	**Frequency, %**
Autonomic nervous system disorder	25,3
Visual impairment	22,4
Urinary tract infection, kidney stone disease	15,9
Gastrointestinal diseases	13,9
Thyroid pathology	8,9
Pathology of ENT organs	7,4
Diseases of liver and biliary tract	6,0
Chronic viral hepatitis B and/or C	5,3
Skin diseases	4,6
Chronic bronchitis, bronchial asthma	3,2
HIV infection	3,2
Polymorphism	1,0
Type 1 diabetes mellitus	0,9

AMERICAN ACADEMIC PUBLISHER
INTERNATIONAL JOURNAL OF MEDICAL SCIENCES
ISSN NUMBER: 2692 - 5206 Volume 5,October ,2025

Cytomegalovirus infection, herpesvirus	0,9

DISCUSSION

Premature birth is a complex multifactorial pathology [9, 10-13]. Factors of various significance are involved in the implementation of preterm labor: urinary tract infections, arterial hypertension, hyperglycemia and diabetes mellitus during pregnancy, cervical contractions less than 25 mm, chorioamnionitis, body mass index > 30 kg/m2 [17-19]. The following risk factors are associated with premature birth: gestational diabetes mellitus, premature rupture of membranes, intrahepatic cholestasis, nicotine addiction, and rural life [10-13].

We determined the significance of these factors and showed the influence of the risk of termination of pregnancy, fetal obstruction by the umbilical cord on the birth of a premature baby at 34 0/6-34 6/7 weeks [13]. The timing of preterm birth was inversely related to the woman's body mass index, and late preterm births were predicted when the body mass index was above 23 kg/m2 and below 28 kg/m2 [12].

Non-inflammatory diseases of the uterus, such as female infertility, fibroadenoma, and myoma, increased the risk of premature birth at 37 weeks [13]. The fact of living in the city for a week prolongs the term of pregnancy compared to women living in the countryside [12].

CONCLUSION

The causes of premature birth are determined by many factors that change throughout life and include a complex of obstetric-gynecological, somatic, hereditary, and social predispositions [12, 13]. The regularities of changes in the significance of factors of preterm birth, identified by us, are necessary for determining the volume of specialized medical care in the intensive care units of newborns and caring for them in the departments of pathology of newborns and preterm infants.

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