



## CAUSES OF PREMATURE BIRTH AND FETTERS AND WARNINGS

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### Summary

A premature birth (PB), despite all the efforts of modern medicine, remains a significant problem in many countries of the world. The amount of PBs in the world, regardless of the economic level of the country remains at a stable level. The causes of PBs occurring in the Bukhara region in 2018-2019 are studied in the paper. A low indicator of PR (5.4%) was recorded in Bukhara region in 2019. The main reasons of spontaneous and induced PBs depending on the term of gestation and their dynamics for the indicated years are revealed. The authors revealed the decrease in the number of cervical incompetence (CI), severe preeclampsia, as the cause of PB in all gestation terms. However, the incidence of premature rupture of the membranes (PRM) has increased, as the causes of PB during the period of 22-27 weeks, and in terms of 28-33 and 34-37 weeks due to spontaneous birth activity. The features of the work, continuously conducted in the Bukhara region on the problem of Pbs are noted. The reserves of reducing the main causes of PR are noted. The basic aim of obstetrics is the decrease of parent's and children's illness and death. The large role in the decision of this task is allocated to duly and optimum medical aid. We carried out the analysis of premature partus for the last 2 years on the materials of the urban maternity Bukhara Region.

**Keywords:** preterm labor, preeclampsia, premature rupture of membranes, isthmio-cervical insufficiency.

## ПРИЧИНЫ ПРЕЖДЕВРЕМЕННЫХ РОДОВ И ПУТЫ ИХ ПРЕДУПРЕЖДЕНИЯ

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### Резюме

Преждевременные роды (ПР), несмотря на все усилия современной медицины, остаются проблемой во многих странах мира. Количество (ПР) во всем мире, независимо от экономического уровня страны остается на стабильном уровне. Изучены причины ПР, произошедшие в Бухарской области за период 2018-2019 гг. В Бухарской области зафиксирован низкий показатель ПР – 5,4%. Выявлены



основные причины самопроизвольных и индуцированных ПР в зависимости от срока гестации и их динамика за указанные годы. Отмечено явное снижение числа истмико-цервикальной недостаточности (ИЦН), тяжелой преэклампсии, как причины ПР во всех сроках гестации. Однако, увеличилась частота преждевременного разрыва плодных оболочек (ПРПО), как причины ПР в сроке 22-27 недель, а в сроках 28-33 и 34-37 недель за счет самопроизвольно наступившей родовой деятельности. Отмечены особенности работы, непрерывно ведущейся в Бухарской области по проблеме ПР. Отмечены резервы снижения основных причин ПР. Основной задачей акушерства является снижение материнской и детской заболеваемости и смертности. Большую роль в решении этой задачи играет своевременное и оптимальное родоразрешение. Проведен анализ преждевременных родов за последние 2 года (2018-2019) по материалам Бухарской област.

**Ключевые слова:** преждевременные роды, преэклампсия, преждевременный разрыв плодных оболочек, истмико-цервикальная недостаточность.

## MUDDATDAN OLDINGI TUG"RUQNING ETIYOLOGIYASI VA OLDINI OLISH USULLARI

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### Annotatsiya

Erta tug'ilish (PR), zamonaviy tibbiyotning barcha harakatlariga qaramay, dunyoning ko'plab mamlakatlarida muammo bo'lib qolmoqda. Mamlakatning iqtisodiy darajasidan qat'i nazar, butun dunyoda (PR) miqdor barqaror darajada saqlanib kelmoqda. Buxoro viloyatida 2018-2019 yillar davomida ro'y bergan PR sabablari o'rganilmoqda. Buxoro viloyatida past PR ko'rsatkichi qayd etildi - 5,4%. Asosiy Akusherlikning asosiy maqsadi - onalar va bolalar kasallanishi va o'limini kamaytirish. Ushbu muammoni hal qilishda o'z vaqtida va optimal etkazib berish muhim rol o'ynaydi. So'nggi 2 yil ichida (2018-2019) perinatal markazning Buxoro viloyati bo'yicha materiallari asosida erda tug'ilish tahlili o'tkazildi.

**Kalit so'zlar:** erda tug'ilish, preeklampsi, membranalarning erda yorilishi, ishemik-servikal etishmovchilik



## Relevance

All countries are faced with the problem of preterm birth (PR) and its consequences. Despite all the efforts and successes of modern medicine, PR remains a problem in many countries of the world. Of course, the indicator of the number of PR is very different, as are the indicators of early neonatal and infant mortality in developed European and so-called third world countries. The financial costs of the state for nursing one premature baby are in the hundreds of thousands. The expenses of the family and the state for the subsequent long-term rehabilitation are unknown and are not analyzed by anyone. But, in the end, these children are characterized by a high level of morbidity, deaths under the age of five, associated with complications of prematurity, up to disability. In recent years, significant progress has been made in the Bukhara region in reducing these indicators. It is interesting to follow what has changed over the years in the structure of the causes, the timing of the PR, what successes or failures have been achieved.

## Purpose of the Study

To study the causes of early delivery in dynamics for the period 2018-2019.

## Materials and Methods

A continuous retrospective study covered 100 birth histories of women who gave birth at the Bukhara Perinatal Center. All patients, upon admission to the maternity complex, fill out an informed consent to the processing of personal data and their medical records, including their individual records, by the employees of the maternity complex for ongoing internal audit and quality control of medical care in various clinical situations, including number and at PR. The material was processed using Microsoft Excel and Statistica 13.0.

### Research results

In the perinatal center of the city of Bukhara, 230 (35%) cases of PR were recorded for the period 2018-2019, only the remaining 120 (28%) in other health facilities of the subject. This is undeniably a positive development, as concentration of PR care at the third level is known to improve perinatal outcomes. Thus, only 2.5% of early deliveries were in first-level health facilities, which certainly indicates a really implemented patient routing scheme. Cases of PT at the second level are mainly associated with transportation when it is impossible to perform it (for example, in case of premature detachment of a normally located placenta (PONRP) or acute fetal hypoxia) or gestational age (usually these are late TP). Thus, all cases of very early CR in the Bukhara region took place in the LC. In 2019, the trend towards a decrease in



the number of PRs, which has been emerging since 2018, continued. Thus, in 2019, a rather low PR indicator was noted - 5.4%, compared to 2018 - 6.8%. In the Bukhara region, an audit of all cases of PR that occurred in the region is continuously carried out for the timely identification of the causes of PR and analysis, and detection of defects.

All PBs, depending on the gestational age, were divided into three groups: at 22-27 weeks (very early PB), 28-33 (early PB) and 34-36.6 weeks of gestation (late PB). Compared to 2018, there was a decrease in the number of very early PRs from 7.5% to 5.2%, which was close to this indicator in the Russian Federation - 5%. Otherwise, the structure of the PR remained the same, the number of early PRs is 35% in 2019 (25% in the Russian Federation). So the number of late PRs did not change significantly and amounted to 35% in 2019, and in 2018-50%.

PR groups are divided into spontaneous and induced (there were medical indications for the completion of pregnancy). Spontaneous PR included childbirth that occurred due to PRPO, ICI and spontaneously developed labor activity. Induced PR had the following causes: preeclampsia, acute fetal hypoxia, fetal growth retardation syndrome (FGR), PONRP, placenta previa with bleeding, antenatal fetal death, hemolytic fetal disease (HFD), threatening uterine rupture along the scar, and others. The main achievement of the last two years in the structure of the causes of PR in relation to the data of 2018, as can be seen from Table 1, is the decrease in CCI as the cause of PR in all gestation periods.

Table 1 - Dynamics of the structure of the causes of spontaneous PR in 2018-2019

	PRPO, %	Spontaneous labor activity,%	ICI,%
PR at 22-27.6 weeks of gestation	16 (35*)	22(16)	16(13,5)
PR at 28-33.6 weeks of gestation	34 (31)	20 (27,6*)	8(2,5*)
PR at 34-36.6 weeks of gestation	39 (30,5)	13 (31,5*)	8 (0,8*)

Note: \*-marked indicator is significantly different from each other at  $p < 0.05$ ; figures for 2018 are given without brackets, and figures for 2019 are given in parentheses.

An unconditional "breakthrough" since 2018 has been a significant decrease in the number of CCI, which is clearly caused by the active use of obstetric pessaries as an outpatient method that does not require hospitalization for the correction of detected CCI, which is clearly seen from Table 1. At the same time, the correction of CCI performed only with an obstetric pessary was insufficient and required cerclage in





only a small percentage of cases: 4.2% of very early ARs, 2% of early ARs, and 1% of late ARs.

Studies have proven the relationship of infections of the urogenital tract, ultimately leading to PROM and, as a consequence, to PRP. Compared to 2018, there was an increase in PRPO as a cause of PR in the period of 22-27 weeks of gestation. Thus, colpitis or bacterial vaginosis was detected in 28.1%, 34% and 42% of cases, respectively, of the PR groups, where PRPO became their cause. According to clinical protocols, antibiotic therapy is required. To assist with recurrent miscarriage, a bacteriological examination of the contents of the cervical canal and the identification of other STI pathogens are required. If STI pathogens are identified, antibiotic therapy is required from 16 to 20 weeks, which reduces the risk of infection of the membranes and, accordingly, the risk of their premature rupture. Requires the appointment of antibiotic therapy and detectable asymptomatic leukocyturia or bacteriuria, detected in 17.8% (28-33 weeks) and 33.6% (34-37 weeks) of cases.

In 2019, compared to 2018, an increase in the number of spontaneously occurring early and late ARs was revealed. It is generally recognized that the appointment of gestagens in the risk group for miscarriage, as well as in patients with recurrent miscarriage, improves prognosis, however, appropriate instructions are required to comply with the dose, frequency and route of administration of the drug. In the presence of relevant complaints and the confirmation of the diagnosis "False contractions up to 37 weeks of pregnancy" revealed during an objective examination against the background of the available progestogen therapy, the appointment of tocolytics and, possibly, hospitalization of patients in the pregnancy pathology department is required.

Analyzing the causes of medically induced PR, a slight increase in the number of preeclampsia at 22-27 weeks from 11% to 12.5% was revealed. In all groups, the number of bleedings as the causes of PR decreased. Undoubtedly positive is the fact of a decrease in the number of antenatal fetal death in terms of 28-36.6 weeks, with an increase in the number of deliveries due to acute hypoxia or sdfd. So, at 22-27 weeks, 2.7% were delivered due to FGR, at 28-33 weeks - 3%, and at 34-36.6 weeks - 4%, despite the fact that due to acute fetal hypoxia, pregnancies were prematurely completed in 1%, respectively. time groups. Correctly chosen obstetric tactics and timely delivery of those who could potentially die antenatally led to a significant improvement in this indicator. Unfortunately, it is impossible to directly influence the number of deliveries where placental insufficiency (its decompensation in acute fetal hypoxia or FGR) has become the cause. Only by preventing the progression of edema to preeclampsia can we reduce this indicator. The available literature data allow us to



recommend, in the presence of excessive weight gain and edema, to perform the determination of BCC by the method of rheovasography using the Diamant apparatus or the determination of EDV (end diastolic volume) during echocardiography to identify possible hypovolemia and prescribe its subsequent correction with hydroxyethylated starch preparations (drugs of this group are included in the list drugs according to the standard for the care of edema of pregnancy). It also requires the implementation recommended by the National Guidelines of 2019 and confirmed as highly specific by some authors to predict the risk of preeclampsia by determining the resistance index in the uterine arteries and umbilical cord up to 20 weeks. Also required Protocol Regulated "Hypertensive Disorders During Pregnancy" in childbirth and the postpartum period

### Conclusions

The positive dynamics of PR in. Thus, in 2019, the lowest level of the number of PRs over the past 2 years was reached - 4.4%, which is below the average for the Russian Federation. The structure of PR by gestational age in dynamics relative to 2018 did not change significantly: with a decrease in the number of very early PR from 7.5% to 5.2%, it still remains high and at the same level relative to 2018 - 34% of the number of early PR. In 2019, the number of PRPO as the causes of very early PR increased to 35%, with an impressive decrease in the number of CCI as the causes of PR for all gestation periods. for all gestational ages.

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