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## **STATISTICAL ANALYSIS OF THE STRUCTURE OF THE BIRTH RATE OF UNDERWEIGHT CHILDREN IN THE BUKHARA REGION**

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**Abstract:** The authors conducted a retrospective analysis of the frequency and structure of the birth rate of underweight children in the Bukhara region for 2018-2020, studied the medical and social aspects and perinatal features of preterm birth. The possibility of predicting perinatal outcomes and optimizing preventive measures for pregnant women at risk has been established.

**Keywords:** small children, premature birth, pregnancy, fetus, gestation.

### **Relevance**

The situation of premature birth and the birth of a small child is the most acute crisis situation in a woman's life and requires timely psychological assistance to a woman in labor in the dyad "mother-small child" [1].

One of the most urgent problems of obstetrics and neonatology is the miscarriage of pregnancy and the birth of children with a low body weight (less than 2500 g) as a result of premature birth or intrauterine fetal development delay.

According to WHO, the proportion of such children among newborns ranges from 5 to 16 %. In developed Western countries, the birth of small children is registered in 4-12% of all births, and 20,000 small children are born annually in Kazakhstan. Perinatal mortality of underweight children is 6-10 times higher than

that of newborns with normal body weight, and perinatal morbidity is from 70 to 80% and is an important social and economic problem for the state due to the high costs of nursing, rehabilitation and social adaptation of such children [2].

The study of this problem has become especially relevant in connection with the improvement of nursing methods and the transition to new criteria for live birth, when the chance of survival appeared in newborns with a gestational age of 22 weeks [3].

Despite the well-known successes achieved in perinatology, the frequency of preterm births does not have a steady downward trend and is 5-9% in developed countries, from 4 to 15% in the regions of Russia. The highest rate of premature births is registered in Malawi (18.1 per 100 births; 2010), Pakistan (15.8), Indonesia (15.5), Mongolia (13.5). In the Central Asian region, the preterm birth rates are slightly reduced and amount to 100 cases of childbirth: in Tajikistan (10.7), Kyrgyzstan (10.4), Kazakhstan (8.8), Uzbekistan (8.7). The lowest indicator is in Latvia (5.3), Belarus (4.0) [4.5].

The main criterion for prematurity is the period of pregnancy at the time of delivery and the child's body weight at birth. Children born before 38 weeks of pregnancy are considered premature. With a weight of 500 g to 1000 g-such children are considered to be underweight or born with extremely low body weight (ELBW). With a body weight from 1001g to 1500g – low-weight or children with low body weight (LBW). If the child's weight is from 1501 g to 2000 g or more than 2000 g, then the child is premature [1].

Deeply premature babies cause not only high neonatal morbidity and disability, but are also the main component of reproductive losses [6].

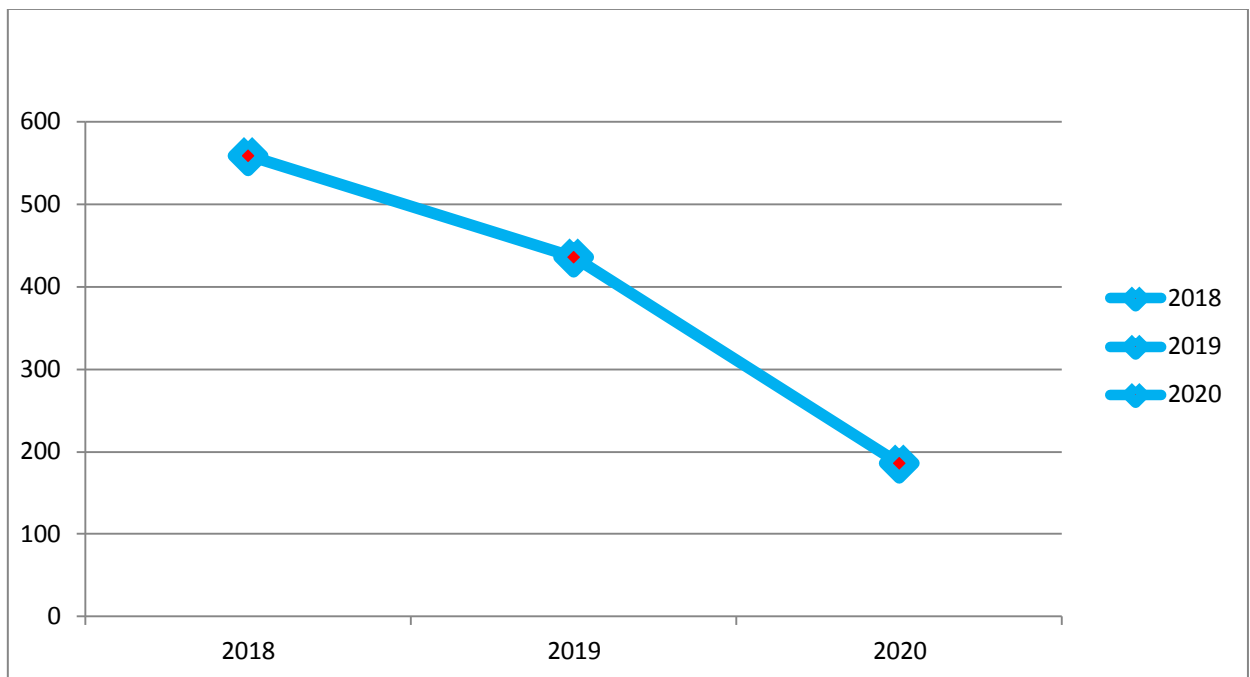
The issues of antenatal differential diagnosis of fetuses with low gestation weight and intrauterine growth retardation syndrome are still controversial. Various perinatal outcomes in fetuses that are underweight by the gestation period dictate the need to search for additional diagnostic criteria to identify the causes of low fetal

body weight (placental, fetal and constitutional) and determine the tactics of managing such a pregnancy [7].

**The purpose of research:** To study the regional structure and perinatal features of the birth rate of underweight children in the Bukhara region.

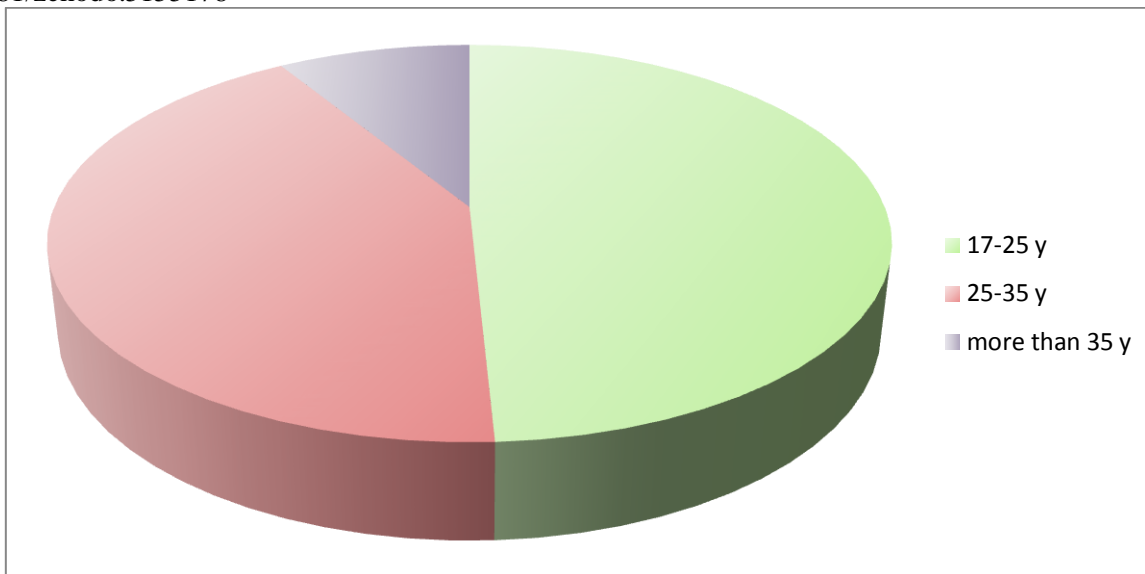
**Materials and methods.** A retrospective analysis of 1,181 medical records of pregnant women hospitalized in the Bukhara regional Perinatal Center from 2018 to 2020 for premature birth was carried out.

**Results and their discussion.** The results of the study showed that the highest frequency of birth of small children was in 2018, which was 559 (47.3%), in 2019 – 436 (36.9%) and the lowest indicator was in 2020 – 186 (15.8%), which indicates a tendency to reduce the frequency of premature births over 3 years (Fig.1).



**Figure 1. Birth rate of small children**

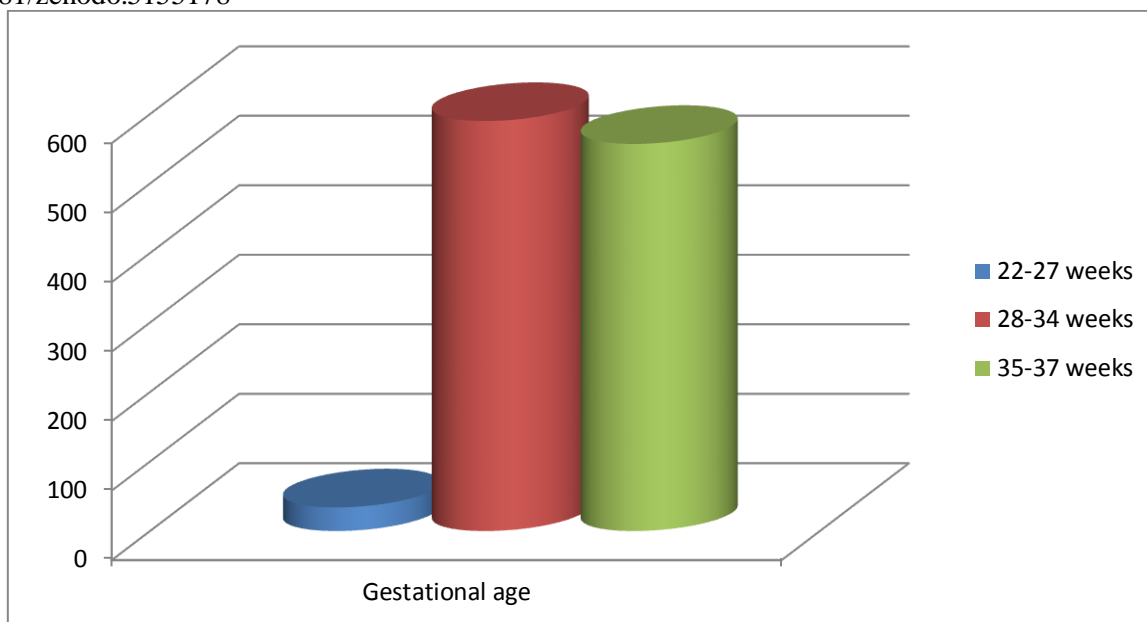
Depending on the age, women in labor were divided into 3 age categories: 17-25 years – 582 (49.2%), 25-35 years – 496 (42.0%), 35 years and more – 104 (8.8%), who made up the smallest number of women in labor (Fig.2).



**Figure 2. Distribution of women by age categories**

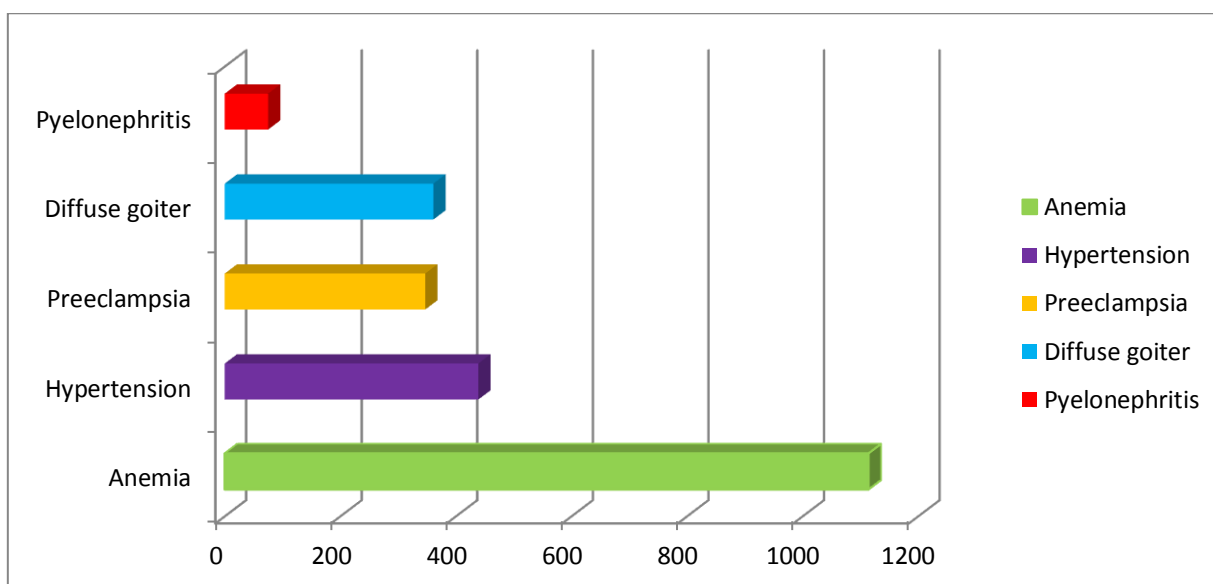
The analysis of data on the place of residence revealed the frequent hospitalization of pregnant women living in rural conditions, which amounted to 970 (82%). Among all the hospitalized patients, 61 (5.1%) had a related marriage. The study of the level of education of women showed that out of all hospitalized pregnant women - 113(9.5%) were with higher education, 1007(85.2%) - with secondary education. The level of enlightenment of mothers was of significant importance in postpartum adaptation and maternal-fetal relationships with an underweight child.

According to the distribution by gestation period, 34 (2.9%) newborns with extremely low body weight (ELBW) were born at 22-27 weeks, the highest frequency of premature births occurred at 28-34 weeks - 590 (49.9%) and at 35-37 weeks – 557 (47.2%) births, respectively (Fig.3).



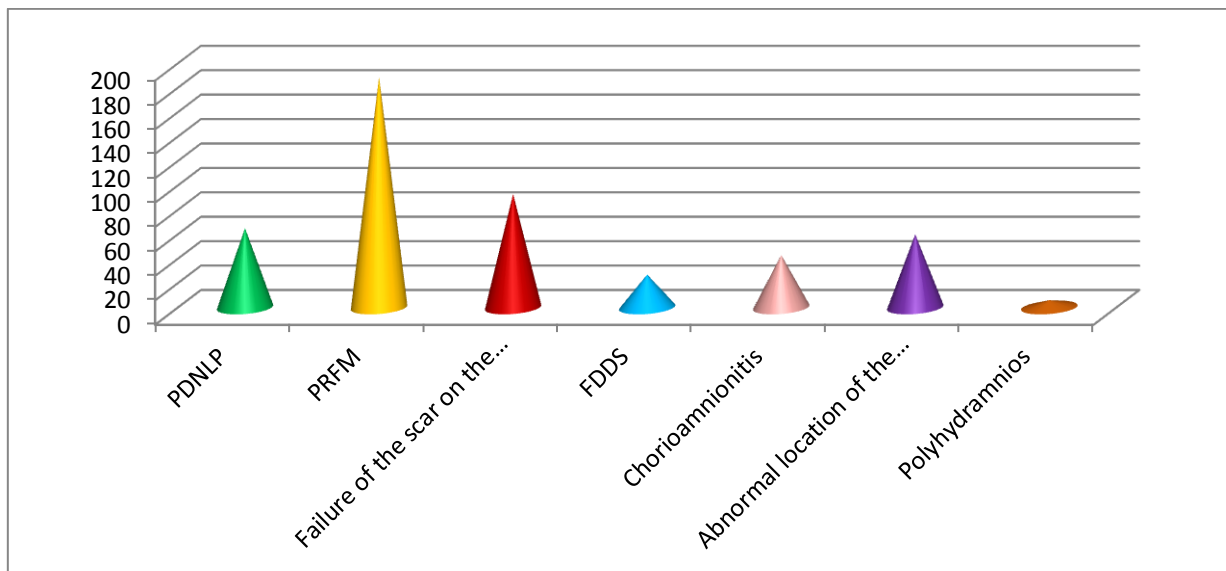
**Figure 3. The frequency of childbirth by gestation period**

In the structure of extragenital diseases (EGD), the following were predominant: anemia-1114 (94.3%), hypertension of pregnant women – 439 (37.2%), diffuse goiter - 361 (30.6%), preeclampsia – 347 (29.3%), pyelonephritis – 75 (6.4%) (Fig.4). There were no significant differences between the other nosological forms, which is consistent with the results of other researchers.



**Figure 4. Structure of extragenital pathology of women**

In the structure of obstetric pathology, premature detachment of the normally located placenta (PDNLP) was more common - 65, prenatal rupture of the fetal membranes (PRFM) - 189, abnormal fetal location - 60, chorionamnionitis - 43, failure of the scar on the uterus - 93, polyhydramnios - 6 and fetal disorders (fetal development delay syndrome of the 2nd degree (FDDS)) - 27 (Fig.5).



**Figure 5. Structure of obstetric pathology of women**

**Conclusion.** Thus, based on the results of the study and statistical analysis of the birth histories of small children, it was revealed that premature births occur more often in women who permanently live in rural areas, aged 17 to 25 years, who have mainly secondary education. Deficient conditions of pregnant women, such as anemia and diffuse goiter, as well as arterial hypertension and preeclampsia, prevail among EGD, which is directly related to the risk of developing obstetric pathology. It is established that the control and prevention of the most common EGD depends on the preventive measures of the primary health care system, and the choice of further delivery tactics plays an important role in the formation of a healthy generation and support for the reproductive potential of women in the future.



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