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THE RELEVANCE OF PRETERM BIRTH IN MODERN OBSTETRICS

Temirova Dilnoza Olimjonovna

Asia International University

Annotation

Preterm labor is the premature termination of pregnancy during the gestational period from the 22nd to the 37th week of pregnancy. Taking into account the gestational age of the fetus, we divide premature labor into 3 periods: 1) from the 22nd to the 27th week, 2) from the 28th to the 33rd week, 3) from the 34th to the 37th week. Taking into account the labor processes that occur, the following reasons are considered risk factors for this process: socio-biological external extracorporeal factors (deficiency in alimentary nutrition, excessive consumption of caffeine-rich drinks, drinking and smoking of narcotic substances, mental stress processes, traumas, radioactive radiation associated with work). Obstetrics and gynecological history (very young mother, not physically ready for motherhood or older mothers, history of premature births, frequent spontaneous abortions, multiple pregnancies, complicated obstetric history), extragenital diseases (diabetes mellitus, pyelonephritis, myopia, peripheral vascular varicose veins, obesity, bronchial asthma, pneumonia, urogenital diseases, viral diseases), pregnancy complications (gestational hypertension, eclampsia, preeclampsia, placenta previa, placental abruption, placental insufficiency, excessive or insufficient amniotic fluid, breech presentation, cervical insufficiency, uterine malformation). Fetoplacental insufficiency is a complex of morphofunctional diseases of the placenta that develop due to various extragenital and gynecological pathologies of the fetus and placenta, as well as complications of pregnancy. Primary insufficiency occurs in the early stages of pregnancy (16-18 weeks), during the formation of the placenta and during organogenesis under the influence of infectious viral, bacterial diseases, endocrine, iatrogenic factors. Secondary fetoplacental insufficiency develops with an initially normally formed placenta, under the influence of maternal factors or complications of pregnancy.

Keywords

preterm birth, intrauterine infections, isthmic cervical insufficiency, perinatal pathology, tocolytics.

Every year, about 15 million premature births occur worldwide at less than 37 weeks of gestation. The overall rate in Russia is relatively stable, from 4.3% in 2012 to 4.1% in 2017. Preterm birth remains the second most common cause of neonatal mortality and the most common cause of infant mortality in middle- and high-income countries

According to scientific studies, about 5% of premature births occur at 28 weeks of gestation, about 15% at 28-31 weeks, about 20% at 32-33 weeks, and 60-70% at 34-37 weeks [7]. Preterm birth (22-31 weeks) is associated with the most severe perinatal complications and perinatal mortality [9, 11].

Based on a retrospective analysis of the birth histories of 25,297 women who gave birth in maternity hospitals in the Tula region during 2006-2008, the main risk factors for early MOT were found to be multiple pregnancy (75.8%) and cervical insufficiency (54.9%).

Despite extensive research on this condition, the incidence of MOT remains stable worldwide, with an increase in Africa and North America. The incidence of preterm birth in the United States is approximately 12-13% and in most developed countries in Europe 5-9%.

Preterm birth is part of the "major obstetric syndromes", which include paternal, maternal, fetal and epigenetic factors.

In recent years, the problem of very preterm and premature birth associated with cervical insufficiency has increased several times for local obstetricians due to the registration of perinatal deaths according to the new criteria for live births from 22 weeks of gestation.

Failure to carry a pregnancy to term is a gradual displacement of the fetal egg from the uterine wall and its exit from its cavity as a result of increased uterine contraction activity. Taking into account the gestation period for the fetus, the specifics of obstetric tactics and consequences of premature birth, it is appropriate to distinguish 3 periods of such births: 1. Premature birth at 22-27 weeks (fetal weight 500-1000 gr.) accounts for 5% of the total number of births. They occur mainly due to isthmic-cervical insufficiency, infection of the lower pole of the placenta and its premature rupture. In this group, the consequences of birth are very bad for the fetus, perinatal morbidity and mortality are very high. 2. Preterm births occurring at 28-33 weeks (fetal weight 1000-1800g) have different causes than very preterm births. Despite the immature fetal lungs, their maturation can be achieved with the use of glucocorticoids or other drugs. The results of childbirth are better than in the previous 35 'group.

3. The causes of premature births (fetal weight 1900-2500 g and more) occurring at 34-37 weeks of pregnancy are very diverse compared to the previous groups. Etiology: genital infantilism, endocrine diseases (thyrotoxicosis, diabetes mellitus), kidney and heart diseases, isthmic cervical insufficiency, multiple pregnancy, hypertensive syndromes, maternal age ($x \leq 18$, $35 \geq x$), placenta previa, malposition of the fetus, intrauterine infections.

Termination of pregnancy at 32-36 weeks often develops in pregnant women with early onset of sexual activity, extramarital pregnancy, a history of abortions, inflammatory diseases of the genitals, infertility, habitual abortion, varicose veins of the lower extremities, late pregnancy, fetoplacental insufficiency, and the threat of chronic fetal hypoxia.

In such women, labor is often complicated by premature rupture of the membranes and uterine malformations.

According to the March of Dimes, the following may be signs of preterm labor:

•more vaginal discharge than usual;

•changes in discharge, which may be bloody, watery, or mucous;

•pain in the pelvic area or lower abdomen;

•pain in the lower back, especially if it is persistent;

•abdominal spasms, which may be accompanied by diarrhea;

•painful contractions that are regular or frequent;

•watery discharge;

Anyone who experiences one or more of these signs should contact a doctor or go to the hospital right away. Several infections, including some infections such as toxoplasmosis, are more harmful during pregnancy than at other times, which can increase the risk of preterm labor and delivery. A person cannot avoid some factors that increase the risk of premature birth.

For example, age, family or birth history. However, a person can take the following steps to reduce the impact of other risk factors: ¬Be aware of the signs of preterm labor and plan to contact a doctor or go to the hospital immediately if symptoms appear; ¬Attend all prenatal appointments, check-ups and scans, even if your pregnancy is going well; ¬Maintain a healthy weight before and during pregnancy; ¬Try to reduce stress during pregnancy, for example by using relaxation techniques; ¬Leave at least 18 months between pregnancies. ¬Next stepsIf a person is experiencing preterm labor, it is important to contact a health professional or go to the hospital as soon as possible.

Conservative-expectant treatment is carried out in the I and II stages of labor, and active delivery is carried out in the III stage.

Conservative-expectant treatment.

1. Tocalitics (those that reduce uterine tone).

• V-adrenomimetics: salbutamol, fenoterol, terbutaline, partusisten, genipral.

• Magnesium sulfate.

• Calcium antagonists: corinfar (1-3 times).

• Nonsteroidal anti-inflammatory drugs: indomethacin (against prostaglandins).

2. Enhancers of surfactant production in the fetal lungs:

• Glucocorticosteroids: dexamethasone, prednisolone

• Benzanal

• Euphyllin

• Mucosalvan

3. Means that improve the condition of the fetus.

• 40% glucose

• Actovegin

• Curantil

• Vitamin C, E

• Cocarboxylase

• Essential

• ATF

4. Treatment of the cause (treatment of the pathological condition)

It should be noted that boys are disproportionately at risk of death compared to girls born at the same gestational age. Approximately 15 million premature births occur each year, and this number continues to grow. 1.1 million babies die from complications of premature birth.

Vaginal progesterone is included in the clinical recommendations of professional associations in Europe, Canada and the USA for the prevention of MT, which indicates that it is well studied and is appropriate for use in women at high risk of MT. For example, the recommendations of the American Congress of Obstetricians and Gynecologists (2008) state that progesterone should be prescribed for the prevention of recurrent MT in women with a singleton pregnancy, as well as in women with a previous MT due to uterine contractions or premature rupture of the membranes.

It is also recommended to consider the possibility of prescribing vaginal progesterone in women who are incidentally diagnosed with a very short cervix (less than 15 mm) without any symptoms [42]. Women at high risk of MT are recommended to use 100–300 mg of micronized progesterone vaginally 1–2 times a day from 16–36 weeks of gestation [39, 40, 44]. According to the results of a large study conducted in 2011 by S. Hassan and colleagues, in women with a cervical length of 10–20 mm, the use of vaginal progesterone significantly reduced the incidence of MT up to 35, 33 and 28 weeks. At the same time, a significant reduction in the incidence of NDS in infants was observed [45]. The results of more than 30 years of research on the prevention and treatment of MT were reflected in a meta-analysis published by Roberto Romero in the American Journal of Obstetrics and Gynecology in February 2012.

According to this meta-analysis, vaginal administration of micronized progesterone to 755 women with asymptomatic cervical dilatation (less than 2.5 cm) resulted in a statistically significant reduction (1.8-fold) in the incidence of MT up to 33 weeks of gestation. In addition, the meta-analysis also noted clinically important positive outcomes for the fetus: a reduction in the incidence of respiratory distress syndrome (RDS) and a significant (43%) reduction in neonatal morbidity and mortality.

Conclusion. Preterm birth remains relevant to this day. Many scientists around the world are working on this problem and conducting a number of studies. A standard for conducting preterm birth has been developed, and we, obstetricians and gynecologists, always work according to this protocol. Pregnant women who apply in a timely manner are given conservative treatment, but this does not always show its effectiveness. . The number of infant deaths or perinatal diseases after preterm birth is increasing. In addition, there are cases when preterm birth causes serious harm to the mother's health. Preterm birth is a polyetiological pathology. Therefore, every woman and man planning to have a child must undergo a medical examination in a timely manner and consult a doctor for treatment of identified diseases.

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