

ETIOPATHOGENETIC AND CLINICAL FEATURES OF POST TERM PREGNANCY

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Abstract

Postterm pregnancy is one of the pressing problems in obstetrics today, due to the high frequency of pathological processes on both the maternal and fetal sides. Postmaturity occurs in approximately 4-14% of cases. [2]. Despite the length of time that this problem has been studied, many issues related to post-term pregnancy remain incompletely studied and are still relevant today.

Keywords: Post-term pregnancy, etiopathogenetic factors, clinical symptoms, instrumental research methods, prevention.

Introduction

A pregnancy is called post-term if it lasts more than 42 weeks or more than 294 days. Primiparas after 30 years of age are more likely to experience post-term pregnancy [3, 7]. And each pregnancy that ends in a late birth increases the risk of postmaturity in subsequent pregnancies.

Changes in the placenta, which are observed during post-term pregnancy, lead to long, protracted labor and can cause birth injuries to the fetus and mother. All of them are dangerous for the newborn and disrupt the process of its adaptation to extrauterine life.

At present, post-term pregnancy and its causes have not been fully studied, but the main ones can be identified: menstrual irregularities; delayed sexual development; genital infantilism; childhood infections; metabolic disease; long-term stress, psycho-emotional disorders; intrauterine developmental anomalies of the child; diseases of the endocrine system; already suffered a post-term pregnancy; inflammation of the uterus and appendages; uterine tumor; incorrect presentation of the fetus; gestosis; first pregnancy over 30 years of age; large size of the fruit; physical inactivity; a small amount of amniotic fluid; constant threat of termination of pregnancy with drug treatment [3, 18].

The main link in the pathogenesis of post-term pregnancy is changes in the placenta (placental insufficiency). They cause intrauterine oxygen deficiency in the fetus. This deviation leads to pronounced changes and disruption of the child's condition. At the same time, placental



dysfunction, imbalance of the fetal endocrine system, and the presence of risk factors for post-maturity do not allow labor to begin on time, exacerbating existing disorders.

During pregnancy, placental dysfunction is manifested by impaired blood flow in the uterine arteries and/or umbilical cord arteries. A morphological examination of the placenta reveals signs of reduced blood circulation, the formation of small blood clots, sclerosis of the villi and blood vessels, and a decrease in the number of capillaries. Calcifications can also be found in it - local accumulations of calcium in the area of impaired blood flow [3, 9].

For the survival of the fetus, when there is a shortage of oxygen supplied to it, the body starts the process of centralization of blood circulation. At the same time, in the baby's vital organs, such as the brain, heart and liver, blood flow is maintained, but in the muscles, intestines, kidneys and other organs it decreases.

Due to decreased blood flow in the fetal kidneys, urine output is significantly reduced, and oligohydramnios develops. The nature of the amniotic fluid also changes: it loses transparency, becomes cloudy, and acquires a yellowish or greenish tint due to the admixture of meconium.

Due to changes in the composition of amniotic fluid, the production of surfactant is disrupted - a substance that prevents the alveoli from sticking together during exhalation. This causes pathology of the lung tissue and breathing problems after birth. The protective function of the lungs also decreases: the number of bacteria in the water increases, which increases the risk of infection of the lung tissue [1, 13].

Against the background of placental insufficiency, the umbilical cord becomes thin. Because of this, the risk of umbilical cord compression, hypoxia or asphyxia during childbirth increases. A reduced supply of oxygen to the baby's body leads to the accumulation of metabolic products, and metabolic acidosis develops, against the background of which oxygen deficiency occurs in the tissues.

Tissue hypoxia increases the permeability of the vascular walls in the fetus, which leads to fluid retention in the tissues. If fluid accumulates in the brain, cerebral edema may develop. This condition is an unfavorable factor during childbirth: it increases the sensitivity of the brain to the effects of oxygen deficiency and increases the risk of complications due to possible birth trauma. A consequence of intrauterine hypoxia is also a violation of myocardial contraction in the fetus. It affects metabolism, which ultimately makes it difficult for a newborn to adapt to new extraterine living conditions [2, 4, 16].

Symptoms of post-term pregnancy include hardening of the uterus due to oligohydramnios, a decrease in the size of the abdomen, a decrease in the weight of the pregnant woman relative to the last measurements, and discharge from the mammary glands. At the same time, the cervix does not indicate the biological readiness of the birth canal for delivery. Signs of deterioration in the fetus' condition are also detected. According to ultrasound, oligohydramnios, structural changes in the placenta, its premature maturation, impaired blood flow in the umbilical cord arteries or uterine arteries. According to a cardiotocographic study, there is a decrease in the compensatory capabilities of the fetus, signs of its hypoxia (lack of oxygen).

At birth, a post-term baby has a characteristic appearance. Its skin and mucous membranes, as well as the umbilical cord and placenta, are green or yellow. If the amount of protective cheese-like lubricant is reduced, the skin and mucous membranes of the fetus become dry. In the absence of lubrication, they shrink due to contact with amniotic fluid. The skin of the newborn's feet and palms looks steamed, as if after a bath. Long nails are visible on the hands and feet [1, 11].



When post-term the baby is usually large, its height and head are enlarged. But another option is also possible, when a small baby is born with a reduced amount of subcutaneous fat (due to retarded fetal growth), but with the above-described signs of overmaturity. The density of the bones of the newborn's skull is increased, the fontanelles are small, and the sutures are narrow, which makes it difficult for the fetal head to adapt to the mother's birth canal - as a result, this causes injury to the mother during childbirth.

The longer the period of post-term pregnancy, the higher the risk of complications and unfavorable outcome. With asphyxia, as a result of a lack of oxygen, untimely respiratory movements occur, which lead to the swallowing of water and possible inflammation of the lung tissue. If there is an admixture of meconium in the waters, then there is a high probability of meconium aspiration.

Due to hypoxia and centralization of blood circulation, ischemic damage to the myocardium, kidneys and intestines of the fetus is observed, which leads to disruption of tissue respiration processes. With prolonged ischemia, intestinal necrosis, renal failure, etc. are possible. Hypoxia can disrupt the functioning of the nervous system and lead to a child's retardation in physical and neuropsychic development in the future [2, 5,17].

Due to the large size of the fetal head, narrow fontanelles and the density of the bones of its skull, fetal injuries are possible during childbirth [1, 6, 19].

The mother often experiences ruptures of the cervix, vagina or perineum, postpartum hemorrhage, septic and embolic complications. The occurrence of septic complications is associated with infection, which becomes systemic in nature. Embolic complications occur when blood clots, amniotic fluid, etc. appear in a woman's bloodstream. In this case, extremely dangerous processes arise, such as amniotic fluid embolism and septic embolism with a high probability of death [3, 8, 12].

The diagnosis of post-term pregnancy is established on the basis of the above data and the totality of the examination results. During an ultrasound examination of a pregnant woman, there is a lack of dynamic enlargement of the fetus, detection of growth retardation syndrome, a decrease in the volume of amniotic fluid and the appearance of suspension in it. When assessing the maturity of the placenta, a decrease in its thickness and reverse development of the placenta with a complex of its structural changes are observed.

Cardiotocography shows a change in fetal mobility due to hypoxia, a change in the number of heartbeats, and a decrease in the compensatory capabilities of the fetus. Doppler ultrasound of the uterine arteries and umbilical cord arteries reveals blood flow disturbances of varying severity. Blood flow velocity in the middle cerebral artery, aorta, ductus venosus and inferior vena cava of the fetus is reduced. The final diagnosis is established after birth and examination of the baby and placenta [2, 10].

Proper management of pregnancy and childbirth during post-term pregnancy is important. Close attention should be paid to pregnant women with risk factors. Timely hospitalization to the maternity hospital is necessary to examine the pregnant woman and decide on the method of labor management. The choice of method depends on medical history, readiness for childbirth, condition and expected weight of the fetus, and concomitant diseases of the woman. In the postpartum period, it is very important to take preventive measures to prevent bleeding, which may occur due to the structure of the uterus, retention of parts of the placenta, rupture of soft tissues and impaired hemostasis [3, 14, 15].

Prevention of post-term pregnancy includes: identifying pregnant women at risk of possible post-term pregnancy; determination of the exact gestational age of pregnancy by all indicators - the date



of the last menstruation, the date of ovulation, the first ultrasound in the first trimester and ultrasound fetometry in the later stages; prevention of placental dysfunction, hypoxia and the birth of a large fetus; timely hospitalization of the pregnant woman to prepare for childbirth and assess the condition of the fetus.

Conclusions

To summarize, we can say that late birth is characterized by a large number of complications during childbirth and unfavorable perinatal outcomes, requiring early diagnosis and identification of women at risk of post-term pregnancy for timely hospitalization in the antenatal department and preparation for childbirth on time.

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