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PROBLEMS OF ADAPTATION OF POST-BIRTH CHILDREN AT BIRTH AND IN THE EARLY NEONATAL PERIOD

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Abstract. *Cause of post-term pregnancy is usually unknown, but a previous post-term pregnancy increases the risk by 2-3 times. Post-term pregnancy can be caused by disorders affecting the fetal pituitary-adrenal system (e.g., anencephaly, adrenal hypoplasia, congenital adrenal hyperplasia) and X-linked ichthyosis associated with placental sulfatase deficiency.*

In most cases, fetal growth continues until birth. However, in some cases, placental involution (as pregnancy progresses) and multiple infarcts are observed, as well as villous degeneration, leading to placental insufficiency syndrome. As a result, the fetus receives inadequate nutrients and oxygen from the mother, resulting in a thin (due to soft tissue depletion), malnourished infant with depleted glycogen stores and reduced amniotic fluid volume. Such infants are considered premature and, depending on the onset of placental insufficiency and the severity of the condition, may be small for gestational age. Although, placental insufficiency with impaired maturation can occur at any gestational age, it most often occurs after 41-42 weeks of pregnancy.

Key words: *postmaturity, aminoscopy, asphyxia, newborns, gestational age, anencephaly, fetus.*

A post-term newborn is a child born at a gestational age of more than 42 weeks (295 days) with symptoms of biological overmaturity. The typical signs of a post-term (overmature) newborn were described by the English obstetrician J. Ballantyne (1902) and his German colleague G. Runge (1948), that is why the symptom was named Ballantyne-Runge.

Ballantyne-runge complex

- No cheesy grease
- Dryness and maceration of the skin (bath feet and palms)
- Long nails
- Dense skull bones
- Narrow sutures and reduced size of fontanelles
- Greenish discoloration of the fetal membranes and umbilical cord

The etiological factors that cause post-term pregnancy are still being studied. The primary cause of late labor is a disruption in the “maternal-placental-fetal” structure.

The pathology develops due to a disruption in the coordinated work of the mechanisms, that normally stimulate and control the initiation of labor when the fetus reaches the stage physiological maturity. As a result of a true post-term pregnancy, a child is born with pronounced signs of post-maturity.

By the end of a physiological, full-term pregnancy, genetically programmed degenerative processes begin in the placenta. Arterial spasms, blockages, and sclerosis occur, along with a gradual reduction in the number of capillaries. Calcium salts (calcifications) accumulate in the placental tissue. Changes in the chorion are observed: the diameter of the villi decreases, the stroma thickens, and the placental barrier thins. All these physiological changes are aimed at terminating the intrauterine stage of fetal development and serve as preparation for childbirth.

A characteristic feature: dry, macerated skin in areas of natural folds, deprived of protective lubricant. The presence of long nails, compacted skull bones, reduced fontanelle size, a yellow-green tint of the skin and fetal membranes are noted. The diagnosis is established on the basis of anamnesis, clinical examination, ECG data, ultrasound results, amnioscopy, chest X-ray.

At the birth of a child with 2-3 degrees of postmaturity, resuscitation measures are carried out.

There are 3 degrees of postmaturity of a newborn:

1. degree - a newborn with dry but normal-colored skin, cheesy grease is almost absent, amniotic fluid is light, but its quantity is reduced;

2. degree - the general condition of the fetus is satisfactory; the skin of the fetus, amniotic fluid, and umbilical cord are stained green with meconium;

3. degree - the amniotic fluid, skin and nails of the newborn are yellow, indicating more prolonged feta hypoxia.

Postmaturity is fraught with the following risks for the fetus: hypoxia of the child during pregnancy or during childbirth (aging of the placenta causes fetoplacental insufficiency), asphyxia of the child during childbirth, birth injuries of the fetus (fractures of the limbs, intracranial hemorrhages and cephalohematomas due to the disruption of the configuration of the head due to the dense bones of the skull), infectious processes of the skin and neurological disorders in the newborn, damage to the bronchopulmonary system (development of atelectasis, bronchopneumonia and other complications in the child after birth), death of the child during gestation, during childbirth or in the early neonatal period.

The syndrome develops as a result of the prolonged presence of a fully formed mature fetus in the uterus, when the normal gestational age (40 weeks) is exceeded by 2 or more weeks.

As the gestational age increases, the degree of fetal postmaturity increases, which is accompanied by an increase in perinatal morbidity and mortality. In Europe, the incidence of postterm pregnancy varies from 3.5 to 5.9%.

The purpose of this study was to develop interventions to improve perinatal outcomes in post-term pregnancies. To achieve this goal, the following objectives were set: to examine perinatal outcomes in post-term pregnancies depending on gestational age and delivery method, and to monitor the long-term developmental outcomes of children born after late delivery.

In the neonatal pathology department at the first clinic of TSMU, we examined 25 post-term newborns and established the need to identify post-term pregnancies starting at 40-41 weeks of gestation. A diagnosis of post-term pregnancies was established solely based on a combination of signs, the most significant of which were: oligohydramnios, green amniotic fluid, and chronic intrauterine hypoxia

Our observations have shown for the first time that the use of GGV background to prepare the cervix for labor was ineffective and required prolonged use, which increased the rate of post-term pregnancy Currently, it is advisable to use laminaria and prostaglandin gel to prepare the cervix for labor.

Prognostically unfavorable for newborns in the immediate conditions and distant periods of life is the degree of postmaturity, weakness of labor, use of oxytocin for more than 3 hours.

The mortality rate is directly proportional to the degree of post-term pregnancy. At 41-42 weeks, it is 1.1%, with a fatal outcome at 43 weeks occurring in 2.2% of cases. At the extreme level of post-term pregnancy, beyond 44 weeks, the mortality rate rises to 6.6%.

Conclusions: Post-term babies are at risk tor he development of perinatal encephalopathy and changes in the fetus during post-term pregnancy are explained by Down's syndrome, adrenal hypoplasia, breech presentation, kidney pathology (polycystic disease), and disruptions in the development of the pituitary-adrenal system. Post-term pregnancy significantly increases the need for cesarean section. In addition, post-term children lag behind in mental and physical development in the future. The most typical perinatal complications are asphyxia, birth trauma, and stillbirth; the incidence of meconium aspiration and fetal distress syndrome increases significantly. The incidence of meconium aspiration syndrome ranges from 1 to 3% in late births with meconium-filled fluid.

The following rule must be recognized as the main principle: "Only proactive or, in extreme cases, timely, adequate treatment at the optimal time or childbirth can ensure the existence of perinatology." Treatment should be carried out when there is a risk of developing a pathology or disease, in order to prevent it. Time has preserved many of Aristotle's sayings. One of them is: "Nature does nothing too soon, since otherwise what is done may prove pointless or superfluous." Ilt must be recognized that in perinatology, preventive treatment actions (based on risk factors) cannot be "too early", but can very easily become "too late". Preventive measures are of the causes of based on understanding preterm birth. At 40 weeks, the pregnant woman is hospitalized, and the mother's readiness for labor is assessed. The fetus's condition is diagnosed, and the structural maturity of the placenta is analyzed using ultrasound. If signs of fetalhypoxemia are detected, labor is induced with medication. Severe fetal hypoxemia is an indication for urgent childbirth.

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