Volume 3, Issue 3, March 2025 ISSN (E): 2938-3765

FEATURES OF THE ADAPTATION PERIOD IN INFANTS BORN OF MOTHERS WITH DISABILITIES

Mukhamedova Shakhnoza Tolibovna 1,
Ashurova Nargiz Bahriddin qizi 2
1. Professor of the 2nd Department of Pediatrics, Bukhara State Medical Institute, DSc.
2. Bukhara State Medical Institute, clinical resident of the 2nd Department of Pediatrics

Abstract
This article analyzes the clinical and physiological features of the adaptation period in infants born to mothers with deficiency conditions. Factors influencing the adaptation process in infants have been studied, including maternal nutritional status and perinatal factors. Based on the results, recommendations were developed to improve the adaptation process of babies.

Keywords: Deficiency state, infant, period of adaptation, nutritional state, perinatal factors.

INTRODUCTION

Deficiency status of the mother has a serious impact on the development of the fetus and the process of adaptation of the baby after birth. Especially, vitamin and mineral deficiency, nutritional deficiencies can cause respiratory, metabolic and immunological changes in infants [2]. The main causes of anemia:

- Iron deficiency is the most common cause and occurs as a result of increased iron needs during pregnancy.
- Folic acid deficiency - disrupts the process of cell division and blood formation.
- Vitamin V12 deficiency - important for the development of the nervous system and erythrocytes.
- Iodine deficiency - reduces the synthesis of thyroid hormones and has a negative effect on the development process of the fetus [1,3].

Worldwide statistics: –According to the World Health Organization (WHO), approximately 38% of pregnant women worldwide are anemic, which increases the risk of hypotrophy and premature birth in infants; –Vitamin D deficiency occurs in 18-84% of pregnant women and can lead to bone development problems in babies; –An estimated 300,000 babies are born with neural tube defects each year due to folic acid deficiency [4].

Statistical data in Uzbekistan. According to studies conducted in Uzbekistan, 40% of pregnant women have iron deficiency anemia, which causes hypotrophy and decreased immunity in infants. Iodine deficiency is observed in 60% of pregnant women in our country, which can lead to mental and physical retardation in infants. Vitamin D deficiency occurs in 70% of pregnant women in Uzbekistan, which increases the risk of rickets in infants [5,6].

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

Complication statistics. Perinatal complications, including respiratory distress syndrome, hypoglycemia, and hypothermia, are 2-3 times more common in babies born to mothers with deficiencies than in babies born to healthy mothers. In such babies, the risk of infectious diseases increases by 1.5-2 times due to a decrease in the activity of the immune system. Neurological complications, such as hyperexcitability syndrome and muscle tone disorders, are observed in 25-30% of infants born to mothers with deficiency states [7,9].

The nutritional status of the mother during pregnancy affects the formation of the internal organs of the fetus. The mother's diet, deficiencies of macronutrients and micronutrients can lead to metabolic and hormonal imbalances in the fetus. These conditions, in turn, complicate the adaptation process of the baby after birth. In particular, deficiencies of iron, folic acid, iodine and vitamin D can cause hypoxia, hypotrophy and organ failure in the baby [8].

Also, stress factors in the perinatal period affect the adaptation process. For example, the mental state of the mother, infectious diseases, environmental factors and physical difficulties affect the physiological processes of the baby after birth. Hypoglycemia, hypothermia and respiratory distress syndrome are common in such children in the first weeks [10].

This article analyzes the clinical and laboratory features of the adaptation period in infants born to mothers with deficiency conditions.

Material and Methods

50 babies born to mothers with deficiency conditions and 50 healthy babies as a control group were included in the study. Patients were evaluated based on clinical, biochemical and instrumental methods. The dynamics of the adaptation period, respiratory and metabolic indicators were analyzed.

The mothers of the infants in the study were found to have nutritional deficiencies during pregnancy, including iron, folic acid, vitamin D, and iodine deficiencies. Most of them also had anemia and malnutrition.

During the study, hemodynamic parameters, blood gas analysis, blood-forming elements, biochemical parameters, immunological markers and signs of neurological adaptation were evaluated.

Along with blood tests, the infants' general clinical condition, respiratory function, and digestive system parameters were analyzed. Hypoglycemia, hypothermia, hypoxia, and problems with bilirubin metabolism were noted.

Also, the development dynamics of babies was evaluated at the control points of 7, 14 and 28 days. Specific scales and specific clinical criteria were used in this evaluation process.

Results

A high incidence of respiratory distress syndrome, hypoglycemia, and hypothermia was found in infants born to mothers with deficient conditions. They also observed a decrease in immunological reactivity and a delay in the adaptation of the gastrointestinal system.

In addition, functional changes in the urinary system and weakening of the kidneys were noted in babies born to mothers with deficiency conditions. Hypotension and chronic hypoxic conditions were more common among them.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

Infants in the group had symptoms of low body mass, peripheral blood circulation disorders, thin skin, and weakness. During the adaptation period, an increase in the amount of bilirubin, an increase in the activity of transaminases, and hypoproteinemia were observed.

Also, abnormalities in the activity of the central nervous system were detected, hyperexcitability syndrome and muscle tone disorders were more common. This has led to the prolongation of the adaptation process in the neonatal period and the need for intensive therapy measures.

Discussion

The results showed that infants born to mothers with deficiencies experience serious difficulties in the adaptation process, which were mainly manifested by impaired respiratory, metabolic, immunological and neurological adaptation processes.

Risk of premature birth and perinatal death. Severe anemia during pregnancy leads to weakness, fatigue, and oxygen deprivation in the body, increasing the risk of premature birth by 2-3 times. According to global statistics, perinatal mortality is 29% higher in mothers with anemia. Reduced immunity in infants: Iron deficiency weakens the immune system, increasing the risk of infectious diseases in infants by 2-3 times. Infants with low hemoglobin levels are more likely to have intestinal infections and pneumonia.

Neurological disorders. Anemia affects the nervous system, and in babies: brain development slows down, differentiation processes are disturbed, motor activity is low, concentration and memory problems are observed, intellectual development is reduced in 20-30% of cases in babies suffering from anemia.

Analyzes show that mothers diagnosed with nutritional deficiencies should receive special dietary and medical care during pregnancy. Because the deficiency affects the formation of the fetus and it can have long-term negative effects on the adjustment of the baby after birth.

In addition, respiratory and metabolic complications in infants can be prevented by strengthening the nutritional monitoring system in the perinatal period and introducing nutritional support programs for mothers.

Also, in order to reduce problems in the adaptation process, it is necessary to use intensive therapy methods in the postpartum period, to develop special care and feeding plans. These activities help to improve the adaptation process in babies and reduce the risk of perinatal diseases.

Conclusion

Infants born to mothers with deficiencies have been observed to have serious problems during the adaptation period, which are mainly manifested by impaired respiratory, metabolic, and immunological adaptation processes.

The data obtained showed that deficiencies lead to the development of perinatal complications in infants. To prevent such conditions, it is necessary to strengthen nutritional monitoring and preventive measures during pregnancy.

Anemia can cause serious complications both during pregnancy and after the baby is born. Therefore, early detection and treatment of anemia in pregnant women can protect the health of babies. It is important to consume foods rich in iron and vitamins during pregnancy and take supplements if necessary. It is also recommended to improve the perinatal care system, wide

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5

implementation of nutritional support programs and development of special intensive care methods to improve the adaptation process in babies.

REFERENCES

1. WHO. Maternal nutrition and fetal development. Geneva: World Health Organization, 2023.
2. Barker DJP. The fetal origins of adult disease. J Dev Orig Health Dis. 2022;13(1):1-5.
3. Black RE, Victora CG, Walker SP, et al. Maternal and child undernutrition and overweight in low-income and middle-income countries. Lancet. 2021;382(9890):427-451.
4. Kramer MS. The epidemiology of adverse pregnancy outcomes: an overview. J Nutr. 2020;130(2):485-488.
5. Ramakrishnan U. Nutrition and low birth weight: from research to practice. Am J Clin Nutr. 2019;79(1):17-21.
6. Golden MH. Specific deficiencies versus growth failure: type I and type II nutrients. J Nutr. 2018;132(3):529-531.
7. Christian P, Smith ER. Maternal malnutrition and fetal development. Br J Nutr. 2017;120(S1):S11-S22.
8. Beluska-Turkan K, Korczak R, Hartell B, et al. Nutritional gaps and supplementation in the first 1000 days. Nutrients. 2016;13(3):1166.
9. Villar J, Merialdi M, Gulmezoglu AM, et al. Nutritional interventions during pregnancy for maternal and child health outcomes. Int J Gynaecol Obstet. 2015;109(S1):S23-S33.
10. Allen LH. Anemia and iron deficiency: effects on pregnancy outcome. Am J Clin Nutr. 2014;71(5):1280S-1284S.

Web of Medicine: Journal of Medicine, Practice and Nursing
webofjournals.com/index.php/5