



# FIRST STEPS TO HEALTH IN REHABILITATION OF BABIES WITH PERINATAL PATHOLOGY

**Irbutaeva Lola Tashbekovna**  
Samarkand State Medical University

Article DOI: <https://doi.org/10.36713/epra21976>  
DOI No: 10.36713/epra21976

## ABSTRACT

As is known, hypoxia is a universal factor damaging the central nervous system of the newborn and having a negative effect on the developing brain. Complicated pregnancy and childbirth are one of the main causes of diseases and pathological abnormalities in children not only in the neonatal period, but also at subsequent stages of development. One of the manifestations of trouble in newborns is perinatal lesions of the central nervous system, which play a leading role in further maladaptation and the emergence of a number of diseases. Children with perinatal pathology are often ill and have the potential to become chronically ill or disabled. In the structure of childhood disability, damage to the nervous system accounts for 50%, and in 70-80% of cases it is caused by perinatal factors.

**KEY WORDS:** Child, Hypoxia, Injection, Encephalopathy, Magnesium.

According to the WHO expert committee, 10% of children may be diagnosed with neuropsychiatric disorders, 80% of which, according to pediatric neurologists, are associated with perinatal brain damage (1). This disease is diagnosed in 5–55 percent of children in the first year of life, sometimes including children with mild, temporary nervous system disorders. Severe forms of perinatal CNS damage are observed in 1.5–10% of full-term and 60–70% of premature babies. According to modern concepts, the causes of encephalopathy are: hypoxia (oxygen starvation during pregnancy or childbirth), traumatic (exposure to damaging factors during childbirth), toxic: alcohol, drugs and other toxic substances, and, finally, a large group of infectious diseases leading to complications in the nervous system of the fetus and newborn. It follows from the above that therapy in the early post-hypoxic period is aimed at normalizing general and cerebral circulation, as well as neurotrophic therapy – stimulation of reparative processes in the brain (2,3). And this, in turn, leads to long-term administration of certain drugs and medicinal substances administered into the body parenterally.

It is known that each injection can cause physical and psychological trauma to a child, especially if the injection is painful. Vitamin B-6 and magnesium sulfate are among the medications listed above, and children need to take these medications in parallel and for a long time. Therefore, it is necessary to choose the most accessible and painless medications. In this regard, the most optimal drug is Magne B-6, since it combines “two drugs” (2,3).

Magnesium is the second most important intracellular element in the body. About 20% of magnesium is contained in muscle tissue, and the remaining 20% is in the blood and other tissues of the body.

75-80% of magnesium in blood serum is in the form of ions, and the rest is bound to special proteins. In recent years, the role of magnesium ion in more than 200 enzymatic reactions has been studied. Magnesium activates enzymes, mainly regulates carbohydrate metabolism and stimulates protein formation. This reduces the excitability of nerve cells and relaxes the heart muscle. Magnesium deficiency is manifested by a decrease in the electrical activity of cells. With an increase in the excitability of skeletal muscle cells, the patient experiences tremors, cramps, pain in the muscles of the legs and neck. The excitability of cardiomyocytes also increases, which can lead to tachycardia and ectopic arrhythmia.

Increased excitability of vascular smooth muscle cells is accompanied by increased arterial pressure, blood pressure and headache.

Increased excitability of smooth muscles of internal organs is manifested by symptoms of unstable stool (constipation, diarrhea, abdominal pain), stomach pain. According to WHO recommendations, the magnesium content in the blood serum of children is 0.74 - 1.15 mmol/l; A decrease in the indicator below 0.5 mmol/l indicates a clear magnesium deficiency in the organs. Magnesium in combination with vitamin B-6 improves cerebral circulation and has a neurometabolic effect. The most important participation of magnesium ions in bioenergetic processes is that it affects excitability and conductivity, as well as the transmission of impulses along nerve endings.

The aim of our study was to study the effect of Magne B-6 on the condition of children with perinatal encephalopathy.

Magnesium in combination with vitamin B-6 improves cerebral circulation and has neurometabolic effect. The most important role of magnesium ions in bioenergetic processes; affects the excitability and conductivity of nervous tissue.



Human milk contains an average of 30 mg/l of magnesium, while cow's milk contains 120 mg/l, but when feeding a child with cow's milk and formulas based on it, the absorption of magnesium from the intestine is limited. This indicates that the level of magnesium in the blood serum is significantly higher during breastfeeding than during artificial feeding. Common manifestations of magnesium deficiency in the body include decreased motor activity in the child, fatigue or depression, sleep disturbances, convulsions (in newborns), muscle spasms, and heart rhythm disturbances. Magnesium deficiency increases pain sensitivity and enhances lipid peroxidation processes. Materials and methods: 93 children of the first year of life with manifestations of perinatal encephalopathy were examined. Physical examination of sick children revealed sagittal suture opening, open occipital fontanelle in all children, large fontanelle larger than 3x3 cm, unstable horizontal nystagmus, and "sunset" syndrome. We prescribed Magne B-6 orally once a day at a dose of 6-8 mg/kg of body weight. The course of treatment is 15-20 days. Oral administration of magnesium and vitamin B-6 was chosen for ethical reasons, as stated above. As a result of the treatment, the children's condition improved significantly, positive dynamics were noted on the 5-7th day of hospital stay.

## RESULTS

The criterion of effectiveness was clinical improvement of the patients' condition, reduction of intracranial hypertension, improvement of sleep, acceleration of the rate of psychomotor development. the second generation of magnesium preparations containing bioorganic salts. In combination with vitamin B-6, magnesium is better absorbed in the gastrointestinal tract, penetrates and is retained inside the cell. The advantage of this drug is that it is well tolerated, has a pronounced clinical effect and, most importantly, does not harm the child's psyche.

All of the above allows the use of gentle treatment methods, namely magne-B 6, in the rehabilitation of children with perinatal encephalopathy in the early stages.

## REFERENCE

1. Irbutaeva L.T. REHABILITATION OF CONSEQUENCES OF PERINATAL PATHOLOGY IN CHILDREN OF THE FIRST YEAR OF LIFE. AMERICAN JOURNAL OF PEDIATRIC MEDICINE AND HEALTHCARE V 02, 2024
2. Gorodetsky V.V., Talybov O.B. Magnesium preparations in medical practice. M., 2003. 44 p.
3. Gromova O.A. Magnesium and pyridoxine: basic knowledge. M., 2006. 223 p. 4. Gromova O.A., Nikonov A.A. The role and significance of magnesium in the pathogenesis of diseases of the nervous system. 2002. P. 45-49.
4. THE FIRST YEAR OF LIFE // SCIENCE WEEKLY 2019. - 2019. - P. 397-399.
5. CHILDREN. Journal of Cardiorespiratory Research, 1 (SI-I), 72-73.
6. PERINATAL INJURY TO THE NERVOUS SYSTEM. Current scientific research in the modern world, (1-5), 148-151.
7. Barashnev Yu.I. Possibilities of compensation of perinatal disorders of the nervous system in nanovermin and matter VI Russian forum "Mother and Child" M. 2004. - P. 438.
8. Shnitkova E.V., Moshkova A.V. CONSEQUENCES OF HYPOXIC-ISCHEMIC DAMAGE TO THE CENTRAL NERVOUS SYSTEM IN CHILDREN //BBK 57.3 A-77.
9. Barashnev Yu.I., Rozanov A.V., Volobuev A.I., Panov V.O., Kurnov S.B. Structural lesions of the brain in newborns with congenital infections II Russian Bulletin of Perinatology and Pediatrics 2006 - No. 2. - P-8 - 9,
10. Volodin P.I. New technologies and solutions to problems in perinatal medicine and pediatrics. 2004. - No. 3, - P.53-54.
11. Golovchenko O.V., Lukyanova I.S., Dzyuba O.M. I am the second. Features of cerebral hemodynamics in newborns with acute and chronic hypoxia and Perinatology and pelnatry. 2003, - No. 1 P. 5.
12. Ivanova N.A. Gumenko E.G. Is the A pgar indicator a "marker" of perinatal damage to the central nervous system of a newborn? N Proceedings of the VI Russian Forum "Mother and Child". M. 2004. - P. 543-544.
13. Ulseco E.A., Bogdanovich B.B. Ultrasound diagnostics of diseases of newborns. M. 2001. - P. 80.
14. Berner R. The importance of infection Streptococcus agalaciac, its treatment and prevention (in the perinatal period U lixpert-Rev Anti, InfecL Ther, 2004. - June; 2(3). - P. 406-407).
15. Khak M-, Fanoroff L. And seminars on neonatology. 2000. - V. 5. P. 79.