

## **JUSTIFICATION OF THE NEED FOR CORRECTION OF NEUROLOGICAL DISTURBANCES IN TREATMENT OF RESPIRATORY DISEASES IN CHILDREN.**

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### **Abstract**

In recent years, special attention has been paid to in-depth study of perinatal lesions of the central nervous system, and this is not accidental, since the problem of perinatal lesions of the nervous system has acquired particular relevance in connection with the increase in the frequency of this pathology. Perinatal brain damage accounts for more than 60% of all pathology of the nervous system of childhood, is directly involved in the development of diseases such as seizures, cerebral palsy, and minimal brain dysfunction.

**Keywords:** children, respiratory, treatment

### **Introduction**

Perinatal hypoxia and asphyxia are accompanied by changes in cerebral hemodynamics, which is currently the dominant hypothesis of the pathogenesis of PPPNS in newborns. It is these children that require special attention, due to the fact that, compared to healthy children, they are more likely to suffer from respiratory diseases. This, in turn, contributes not only to impaired growth and development of children, but also to polyprogmasia, increasing the cost of treatment.

From the foregoing, the need for antihypoxic, neurotrophic therapy aimed at normalizing cerebral and general blood circulation follows.

Therefore, we used the drug oxybral, which has a selective vasoregulatory, antihypoxant and neurometabolic effect. Oxybral is of vegetable origin, safe for long-term use. An equally important property is that the drug has a selective vasoregulatory effect: relieves arterial spasm and increases venous tone; contributes to the adaptation of cerebral blood flow in accordance with the metabolic needs of the brain; reduces and stabilizes the peripheral resistance of the vascular bed of the brain.

In addition, the absence of side effects, good tolerability served as the basis for the appointment of oxybral.

**Objective:** To study the features of the course of respiratory diseases in children with consequences of perinatal damage to the central nervous system and justify the need to include the drug oxybral to increase the effectiveness of treatment.

**Materials and research methods.** Under our supervision there were 37 children aged from 3 months to 1 year with respiratory diseases, receiving inpatient treatment on the basis of the Samarkand City Children's Hospital No. 1. Of these, there were 20 boys (54%), and 17 girls (45.9%). The main group consisted of 20 children with respiratory diseases suffering from PPPNS, to whom oxybral was added against the background of conventional treatment, the control group - 10 children with respiratory diseases suffering from PPPNS, who received conventional therapy. A conditionally healthy group consisted of 7 children with respiratory diseases, who did not suffer from PPPNS, and received conventional therapy.

In children with perinatal brain damage, along with the study of the neurological status, studies of the somatic state, the composition of peripheral blood, urine, and feces were carried out. Additionally, instrumental methods were used (ECG, chest X-ray, fundus examination). All children were examined by narrow specialists: an ENT doctor, an ophthalmologist, a neurologist, a pediatrician.

The most frequent background diseases accompanied by the development of PPPNS were iron deficiency anemia (87.4%) and rickets (29.7%). An unfavorable premorbid background was observed in all studied children, of whom grade I anemia in 20 (54.5%), grade II anemia in 15 (40.5%), grade III in 2 (5.4%).

**Обсуждение полученных результатов.** Examination of the children revealed abnormalities in the neurological status. Summarizing the clinical and instrumental data, the following results were obtained: the most frequent was the syndrome of neuro-reflex excitability in 13 children (43.3%), then the syndrome of autonomic dysfunctions in 10 children (33.3%), the syndrome of delayed psychomotor development - 7 children (23.3%) ...

The most frequent complaints of mothers when examining a child was anxiety, which was noted in 92.5% of cases, regurgitation in 31.3%, tremors of the chin and hands in 25.7%.

The main complaints, according to the mothers, in children with the syndrome of neuro-reflex excitability were: emotional lability, startle in sleep, tremors of the chin and hands, difficulty falling asleep, shallow insufficiently long sleep, head tipping back. In children with autonomic dysfunction syndrome, the main complaints were: acrocyanosis, moodiness, anxiety, straining.

The main complaints in children with psychomotor development retardation syndrome were lagging behind their peers in mental and speech development. Children belonging to this group later began to hold their heads, turn, sit, stand and walk.

Children of all groups, on examination, have a general state of moderate severity. The skin is pale, clean, warm. Acrocyanosis was observed in 12 (32.4%) children. The subcutaneous fat layer is underdeveloped in 10 (27%) children.

The main complaints from the respiratory system were: cough, difficulty in nasal breathing, swelling of the wings of the nose, cyanosis of the nasolabial triangle, difficulty exhaling. On auscultation, fine and medium bubbly moist and dry scattered rales were heard against the background of hard breathing. On the part of the cardiovascular system, in almost all children auscultatory heart sounds were muffled, functional murmurs were heard in children with severe anemia. Most of the children experienced an increased heart rate. On the part of the gastrointestinal tract, children in the second group were observed: regurgitation in 5 (13.5%), vomiting in 3 (8.1%) and frequent constipation in 4 (10.8%) children. On examination, increased intestinal peristalsis, rumbling, and bloating were noted. The chair is irregular, without pathological impurities.

In the rest of the children, no pathological signs were found on the part of the gastrointestinal tract. The abdomen is soft, painless. The liver protrudes from under the costal margin by 2 cm, the spleen is not palpable. The chair is decorated, no changes.

From the side of the central nervous system in children with the syndrome of neuro-reflex excitability against the background of normal mental development, the following symptoms were observed: emotional lability, motor restlessness arising from minor changes in the environment, chin tremor, periodic small amplitude tremor of the hands. There was an increase in congenital reflexes, a spontaneous Moro reflex.

In children with vegetative-visceral dysfunction syndrome, muscle hypertonicity, a delay in the reverse development of Robinson's, Babkin's, and cervical-tonic reflexes were observed. Reduced spontaneous activity, tendon reflexes.

In children with the syndrome of delayed psychomotor development from the side of the central nervous system, it was noted: impairment of static-motor functions. Weak or no reaction to the mother's voice, there was no auditory

concentration, the cry was not expressive, there was no humming, the children looked for the source of the sound with their eyes without turning their heads, a rare, difficult to evoke smile appeared. There is no active attention. The reduction of unconditioned congenital reflexes is impaired.

In order to study the psychosomatic processes caused by the use of the drug oxybral and assess the effectiveness of this drug, we performed echoencephalography. Echoelectroscopic examination was carried out on the basis of the city children's hospital No. 1 on an ECHO 12 ultrasound machine. Special preparation of the patient for the study is not required. EchoEG is usually performed with the patient lying down. An ultrasonic sensor, the working surface of which is treated (to ensure acoustic contact) with vaseline oil, is sequentially applied to different parts of the head. Ultrasound signals converted into electrical impulses appear on the screen of the apparatus in the form of a curve - an echoencephalogram, which is photographed and analyzed. Optimal conditions for receiving an echo signal are created when the transducer is placed on the lateral surface of the head 4-5 cm above the external auditory canal along the biauricular line passing through the parietal region.

As our studies have shown, the use of oxybral against the background of traditional therapy had a pronounced positive clinical effect, which contributed to the maximum stimulation of natural compensatory mechanisms, neuroregulatory processes and limitation of the drug load.

Children belonging to the first subgroup - neuro-reflex excitability syndrome due to increased nervous excitability were used oxybral for 20 days (7.5 mg / day orally with meals.)

For children of the second subgroup - the syndrome of autonomic dysfunctions, oxybral was used for 1 month (7.5 mg / day orally with meals) For children of the third group, the syndrome of delayed psychomotor and speech development, oxybral was used for 2 to 6 months.(7.5 mg / day orally

during meals) with the observance of a break between courses and the recommendations of a neurologist.

After inclusion in the complex of treatment of oxybral, these parameters had a faster positive dynamics.

In children with the syndrome of neuro - reflex excitability on the echogram, the number of impulses decreased more significantly than in the control group. The width of the third ventricle decreased almost to normal.

In children with the syndrome of autonomic dysfunctions, after the course of the drug oxybral on the echogram, the pulsation of the waves decreased. The number of pulses increased. The width of the third ventricle is within normal limits.

In children with psychomotor development retardation syndrome, after a course of oxybral administration, frequent waves appeared on the echogram, and the pulsation improved. Large sweeping waves appeared. The width of the third ventricle is within the high norm.

It should be noted that the correction of neurological symptoms contributed to a more rapid improvement in the general condition of children. In these children, in comparison with children of the control group who did not receive oxybral, cyanosis of the nasolabial triangle and acrocyanosis were more quickly arrested. The children became calmer, and their sleep returned to normal. Moreover, obstruction syndrome, swelling of the wings of the nose and shortness of breath disappeared earlier in children of this particular group. We do not dispute that this was associated with the use of bronchodilators and mucolytics, however, in the group of children receiving oxybral, the effect was significantly higher. In our opinion, the removal of arousal syndrome and vegetative-visceral dysfunctions contributes not only to an improvement in metabolism, but also to microcirculation and blood oxygenation..

**Conclusions.**In general, the results of the studies conducted allow us to conclude that complex rehabilitation with the use of the drug oxybral is

effective for combined disorders in patients with respiratory diseases suffering from PPNS and its consequences. The advantages of this method include, first of all, the fact that stimulation of the regenerative capacity of the brain is achieved by activating natural regulatory mechanisms. Examining functional changes in the central nervous system, when using the drug oxybral and recording echoencephalograms in children, we found that there are positive changes in the echoeg and contributes to a faster normalization of neurological symptoms. The possibility of correcting neurological disorders with oxybral opens up the prospect of rehabilitation and contributes to a significant reduction in the percentage of children with residual symptoms of perinatal CNS lesions, as well as the fastest recovery of children with respiratory diseases.

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