

STUDY OF THE FACTORS OF THE OCCURRENCE OF HYPERTENSION-HYDROCEPHAL SYNDROME IN CHILDREN UNDER THREE MONTHS

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The syndrome of impaired CSF dynamics in children occupies a significant place in the number of perinatal lesions of the central nervous system. The statistical data of many authors confirm the leading place of the hypertensive-hydrocephalic syndrome, which makes up about 55% of all perinatal disorders, often leading to the disability of children (7, 9). Endogenous and endocrine factors, such as severe pregnancy, complicated infection of the mother and child, difficult childbirth with damage to the vertebral and occipital bones, under the influence of intra uterine force and intra abdominal pressure, which inevitably leads to CSF disturbance (1, 3,). All this creates the urgency of the problem in terms of the consequences of perinatal diseases. Another problem, despite advances in science and diagnostics, is not the specificity of clinical syndromes; the state of adaptation, the immaturity of the cortical functions, the compensatory capabilities of the child's brain in the period of the first three months, are the reason for the absence of early focal factors. The main approach to such patients, according to many countries, is dynamic observation (2, 4, 8). The progression of restless behavior, profuse regurgitation, monotonous crying, can be caused by characteristic signs of increased intracranial pressure. Alertness of doctors should cause symptoms of divergence of the cranial sutures, bulging fontanelle, rapid growth rate of the head, overflow of the foot veins of the head, all these signs indicate a change in CSF dynamics and damage to the central nervous system (5, 6). Thus, the determination of the cause of factorial disorders occurring during childbirth, leading to hypertensive-hydrocephalic syndrome, their consequences is important in the early period, to substantiate the etiopathogenetic approach to the treatment of this category of children.

Purpose. To study the factors of occurrence of hypertensive-hydrocephalic syndrome (HGS) by the method of early diagnosis in children in the perinatal period.

Material and research methods. Children were examined in the neonatal pathology department (children's multidisciplinary hospital in Samarkand), the neurology and neurosurgery department of the 1-Clinic SamMI, for the period 2019-2021. The use of ultrasound examination (neurosanography) made it possible to exclude structural changes in the brain (infection, developmental anomaly). The total number of examined children was 46, including 30 children with HGS of hypoxic-ischemic and post-traumatic genesis, 16 healthy children. Children of the main group 10 children from 0 to 1 month, 10 from 1 to 2 months, 10 children from 2 to 3 months. The number of boys turned out to be more than 19 children, girls, respectively 11. The research methods included a standard examination by a neonatologist, neurological status, anamnesis of the mother (period of pregnancy); neurosanography, ultrasound examination of the cervical and lumbosacral spine (taking into account the increasing force of contractions for resistance from the muscles of the pelvic bones

of the mother, the pressure transmitted to the sacrum of the child). Statistical data were processed on an individual computer.

Research result. According to the analysis of the anamnesis of the pre- and perinatal factor, it turned out that a large percentage of the occurrence of HGS in the main group was pathology of childbirth. Long period of labor in 16%, large child, weight exceeding 4 kg at birth in 5 children, functional narrow pelvis in 22%; in one child, the mother underwent urgent surgical intervention due to the dilignence of the placenta. In 3 women in history, during pregnancy, according to the ultrasound of the fetus, a slight increase in the ventricles of an idiopathic nature was found. The Hangar scale is below normal. The neurological status included methods for measuring the volume of the head in dynamics, the size of the fontanelle, and the state of the head sutures. In most of the children examined, an increase in the rate of head growth, which did not correspond to the norm, was noted by 1.5 cm, in 68% of the examined. Strengthening of the venous subcutaneous pattern on the head in 57% of children (Table 1).

Table 1
Examination of children of the main group (%)

Neurological symptoms	Main group (30 children)
Increased head growth rate (> 1.5 cm per month)	68
Vascular subcutaneous pattern on the scalp	57
Nerve reflex excitability	53
Impaired statomotive functions (<24-23 points)	2

Table 2
Neurosonography in the examined children (%)

Parameters	Main group (30 children)
Increased width of the lateral ventricles	100
Increase in the third ventricle (> 3mm)	55
Expansion of the interhemispheric gap	70
Ultrasound of the cervical spine:	59
- displacement of the cervical vertebrae	29

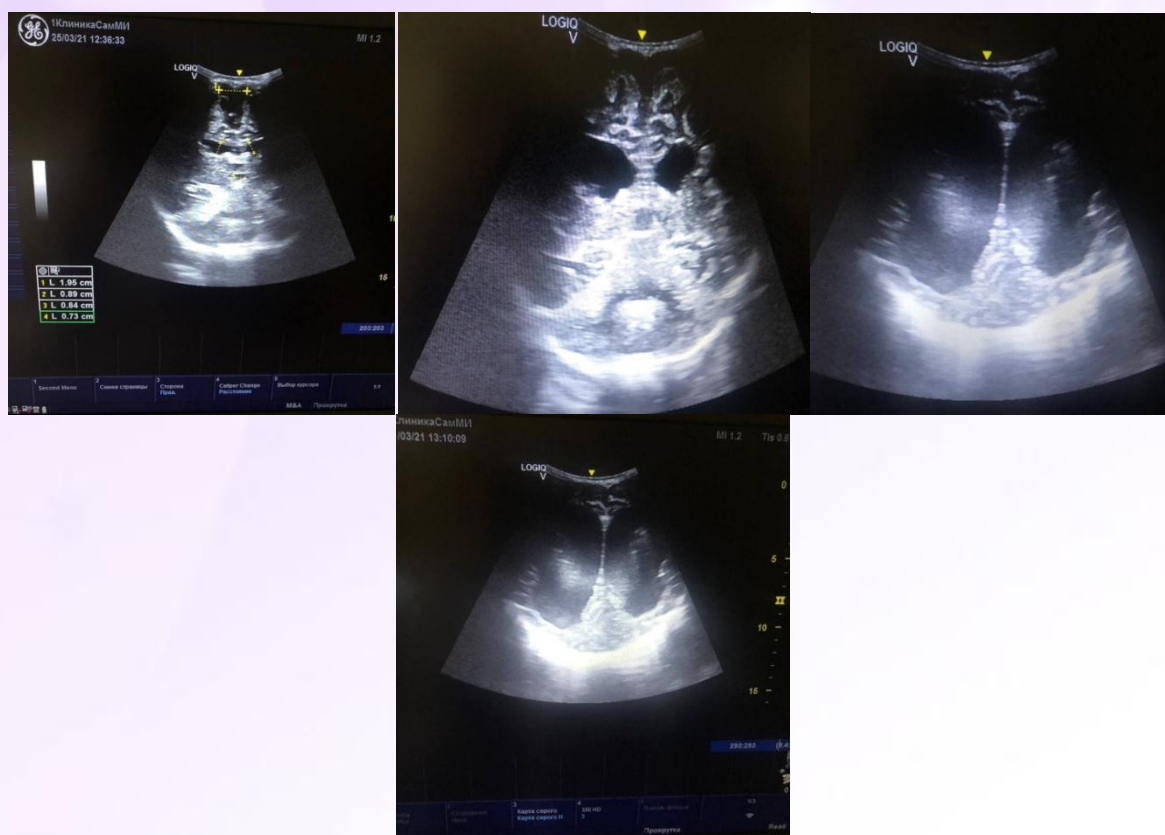


Fig. 1. Neurosonography of a 3-month-old patient

Nervous reflex excitability in 53%, in other cases, on the contrary, children had signs of a symptom of "congestion", impaired statomotive functions up to 82% (increased muscle tone, rigidity). As can be seen from Table 2, there is an ambiguous disturbance in neurosonography. In the main group, the expansion of the lateral ventricles in all cases, the second indicator of the violation of the expansion of the interhemispheric gap, almost 70%; the same increase was observed in the structure of the third ventricle, all signs indicated HGS. In children in the comparison group, neurosonography corresponded to the age standards. Conducting an ultrasound examination of the cervical spine in children of the main and comparative groups turned out to be evidence-based, so, in 62%, displacement of the vertebrae was found, at the level of C2-C4. In several cases, the displacement has led to a decrease in the lumen of the vertebrae. The displacement was also revealed during ultrasound examination of the sacral region at the S1-S3 level. At the same time, the displacement in the cervical spine was combined with a violation of the body weight, the greater the body weight of the child, the increased the frequency of pathology at birth. The evaluation scale of psychomotor development according to Zhurba-Mastyukova revealed a delay in motor development (from 21 to 24 points), which automatically assigns children to the risk group or to the group with delayed psychomotor development.

If we consider children in terms of age level, then the difference is noticeable. In children closer to 3 months, symptoms in several children, compared with the first visit, tended to improve, this is confirmed by the factor of large compensatory and adequate capabilities of newborn children, the improvement is noticeable in 3 children, and deterioration in 1 child, in children 3 months from birth ... Improvement in neurological status was noted in 5 children, in 3 children there was a slight increase in the form of regurgitation, increased tone, chin

tremor, in 2 children the condition stabilized. At the same time, in children, in a stable state of head growth in volume, it approached the norm.

Thus, before identifying the causes of HGS in children in the early stages, children born to mothers with a history of pathological aspects such as rapid or, conversely, prolonged labor, breech presentation or placenta previa, weakness of labor or functional narrow pelvis, large child, with a body weight exceeding the norm compared to the comparison with the mother's body weight, medication-induced labor-stimulating procedures, etc. must undergo a diagnostic examination in the form of neurosanography, ultrasound examination of the cervical and lumbosacral vertebrae, psychomotor testing according to the Zhurba-Mastyukov scale.

Output

1. An unfavorable obstetric history during childbirth in the mother can lead to displacement of the cervical and lumbosacral vertebrae, to a displacement of the skull bones in the occipital region, which in turn gives a violation of CSF dynamics in children and leads to the occurrence of hypertensive-hydrocephalic syndrome.
2. A powerful compensatory and adequate-adaptive factor of children after birth in 25-30% of cases stabilizes the clinical and neurological status without treatment, through passive observation and rest.

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