



CURRENT VIEWS ON THE INCIDENCE OF CONGENITAL SPINAL HERNIAS

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Abstract:

Modern medicine solves many problems related to the health of children, while prevention of perinatal and congenital pathologies is of great importance, the main focus of which is the health of the mother before and at the time of pregnancy.

Keywords: congenital malformations, newborns, pregnancy, abnormal closure of the ends of the neural tube

INTRODUCTION. In addition, environmental and sociogenic risk factors that determine congenital malformations have causal significance [1, 5, 9, 11]. Environmental problems, especially in the conditions of the Megalopolis, environmental pollution factors (biological, chemical), can easily penetrate into the body of a pregnant woman, the placenta, which has a high ability to penetrate adverse factors, thereby disrupting the normal embryogenesis of the fetus [2, 6, 10, 12]. Sociogenic processes, in turn, change the morphological functionality of the body towards pathological mutations, especially during the period of fetal maturation in a pregnant woman, which in a vicious circle creates prerequisites for a violation of neuroimmunoendocrine pathologies in a newborn [3, 4, 7, 8]. Abnormalities of the development of the central nervous system are naturally considered the most severe forms of all congenital pathologies. It is not uncommon for non-curable diseases, but the most difficult clinically, pathogenetically are congenital spinal hernias; The severity of the disease depends on the extent of damage to the spine, spinal cord, meninges, during embryogenesis (abnormality of closure of the ends of the neural tube or repeated opening). For the antenatal period, the microecosystem in which the developing organism is located is undoubtedly important. First of all, this is the mother's body, the level of health, age, lack of bad habits, chronic somatic diseases, the presence of bacterial and viral infections, non-compliance with the rules for the prevention of congenital anomalies during pregnancy, as a result, they form the anatomical and physiological health of the newborn. VSG is a fairly widespread disease among the

neonatology service, according to statistics, among all congenital malformations and severity of anatomical and functional disorders, it occupies a leading position. However, in recent years, there has been a slight decline in the development of congenital malformations in the spinal cord, due to increased control of pregnant women, taking folic acid, iron.

THE AIM OF THE STUDY WAS TO STUDY the clinical examples of congenital spinal hernias, the frequency of manifestation, etiological risk factors for the development of the disease, the peculiarity of combined defects and the outcome of the disease.

RESEARCH MATERIALS AND METHODS. The study was conducted for the period 2018-2023, in the Samarkand region (maternity hospitals of the city and region). The main search was for children from birth with congenital spinal hernias, in addition to having a combined pathology of the brain and internal organs. A more detailed examination (children after birth) took place in the intensive care unit and the neonatal Pathology department at the Children's Multidisciplinary Clinic in Samarkand (where they were transferred from maternity hospitals in Samarkand). A total of 28 newborns with HCV were collected (9 of them died during the newborn period), the rest were sent to the surgical department for emergency interventions (increased liquor). The control group (for comparison) consisted of 16 healthy children of identical age and gender. All mothers (whose children were born with HSV) were asked to complete a questionnaire (compiled at random); this document provided for the possibility of analyzing all possible risk factors of the disease:

obstetric history (for the entire period of pregnancy, with a description of control ultrasound procedures), a description of the health of fathers at the time of conception of the examined children, with a study of the factor of hereditary predisposition, the health of previous children (in number and level of development). In addition, the questionnaire included data from the period of birth, evaluation of the results of childbirth, indicators of the Apgar scale, qualitative change with subsequent correlation of newborn reflexes (depending on the degree of neurological deficit), using the Denver Developmental Screening Test (DDST) scale (1992). All children of the main and control groups underwent an analysis of instrumental additional observation, the main methods of which were MRI of the brain and spinal cord, NSG in the dynamics of examination accounting, ECHO ECG control, ultrasound of internal organs, analysis of blood and urine biochemistry. It should be noted that all examinations were conducted with the written permission of the parents. Statistical processing of the material was carried out on an individual computer, where clinical indicators and indicators of quantitative scales were analyzed using the traditional method according to Spearman's criteria.

RESULT OF INVESTIGATION. As noted earlier, we give examples of clinical cases. It should be noted that out of 12 maternity hospitals in the Samarkand region and the city of Samarkand, for 4 years, an average of 2-3 thousand births revealed 1 case with VSG. At the same time, in the "Neonatology Center" and the MC SamSMU (maternity ward), which provides specialized care for mothers with complicated pregnancies, the

incidence of cases with VSG was higher, on average by 2-3 thousand cases of 2 cases of children with VSG.

Clinical case 1. Patient A (boy) was born at 37-38 weeks gestation with a body weight of 2100 g, length 45 cm, head circumference 29.3 cm, chest circumference 31 cm, with an Apgar score of 5-6 points, by caesarean section. At birth, a congenital malformation was revealed: spina bifida of the lumbosacral spine with liquorrhea, dysplastic type of disorder. A child from 5 pregnancies, 4 births (one pregnancy ended in a late miscarriage), the age of the mother is 36 years old, a housewife. In the first trimester of this pregnancy, the woman suffered the flu, did not go to the doctors, against the background of signs of inflammation, symptoms of edema, kidney soreness joined, body temperature was elevated. In the second half, signs of gestosis and fetoplacental insufficiency were noted, in late pregnancy, the woman was registered at her place of residence. Blood tests for TORCH infection, positive revealed: cytomegalovirus, herpes virus. The woman did not take any preventive medications (folic acid, iron, iodomarin, vitamins and minerals). The marriage of the parents is consanguineous (cousins). Examination by a neonatologist after birth (consultation with a neurologist, neurosurgeon) showed focal neurological signs of impairment, in the form of sluggish lower bilateral paresis (lack of reflexes, limbs cold to the touch), absence of pain syndrome from the L3-L4 level. In addition, the patient had many stigmas of embryogenesis (absence of an auricle, non-overgrowth of the upper palate, low forehead, short neck, pronounced skin collar fold).



Fig. 1. Congenital abnormality of the central nervous system. Spina bifida aperta. Myelomeningoradiculocoele in the sacral region.

Clinical case 2. Patient V. (girl), was born at 33-34 weeks gestation with a birth weight of 1750 g., length 43 cm, head circumference 28 cm, chest circumference

26 cm, according to the Apgar scale by 4-6 points. The delivery was carried out by cesarean section, during visual examination, the newborn revealed a congenital

spinal hernia at the level of the lumbosacral spine. The girl was found to have no anus - Atresia of the anus (which required urgent surgical intervention). The newborn was transferred (after birth) to the neonatology intensive care unit, the condition was assessed as extremely severe due to morphofunctional immaturity and focal neurological signs of impairment, lower sluggish paraplegia, absence of pain symptoms from the L3-L4 level. In addition, the girl had a defect consisting in non-overgrowth of the upper lip (cleft lip).

The girl was born from 6 pregnancies, 3 births (three pregnancies did not end in arbitrary miscarriages). A 38-year-old woman, from a socially disadvantaged family, got up for pregnancy very late, did not take preventive measures in the form of taking specialized drugs (vitamins, folic acid), hepatitis C was detected in her mother's blood, she suffered ARVI during pregnancy, blood sugar is elevated, hemoglobin is reduced (anemia of 2-3 degrees). The mother refused the child.



Figure 2. The following figures show the clinical cases of patients (Figs 3, 4, 5, 6)

CONCLUSIONS: Thus, the given examples of clinical cases indicate that HSV belongs to diseases with a multi-factorial basis, where a hereditary predisposition is closely interacted with factors of the external and internal environment, as a result, a defect occurs, a violation of the folate cycle, and a vicious circle in the future, changes the biomechanism of blood production in a pregnant woman of mothers (growth homocysteine levels), which is one of the patterns of formation of congenital malformations of the spinal cord in combination with other malformations. The presented

cases of combined spinal congenital anomalies (dysraphia) are characterized by diverse manifestations of motor sedative changes, pelvic, orthopedic, disorders caused by compression of nerve fibers. Given the relatively uncommon percentage of HCV among the population, in-depth examination, monitoring and increased prevention of women before and during pregnancy are necessary. The study of clinical cases of both closed and open forms of congenital spinal hernias, with combined congenital malformations, will allow them to receive the necessary medical care in a



timely manner, reduce the risk of neurological complications and reduce disability. In addition, the database (bank) of register data on this issue will be replenished to provide information support to healthcare professionals.

LITERATURE:

1. Belial E.S., Khudyakova N.A. changes in the excitability of the cerebellar cortex in early postnatal ontogenesis // Scientific publication "Polenov readings": materials of the X scientific and practical conference; St. Petersburg, 2020. p. 300
2. Ivanov S.V., Kenis V.M., Shchedrina A.Yu., Onufriyukh O.N., Khodorovskaya A.M., Osipov I.B., Sarychev S.A. Spina bifida: a multidisciplinary problem (literature review) // Russian Bulletin of Pediatric Surgery, anesthesiology and intensive care. 2021. Vol. 11, No. 2. pp. 201-213.
3. Ivanov Stanislav Vyacheslavovich, Kenis Vladimir Markovich, Shchedrina Anna Yuryevna, Onufriyukh Oleg Nikolaevich, Khodorovskaya Alina Mikhailovna, Osipov Igor Borisovich, Sarychev Sergey Alexandrovich Spina bifida: a multidisciplinary problem (literature review). Russian Bulletin of Pediatric Surgery, Anesthesiology and Intensive Care, (2021). 11 (2), 201-213.
4. Kokorina NV, Malinovskaya SE, Ershova-Pavlova AA. Epidemiological monitoring of congenital spinal hernia in conditions of anthropogenic stress in the population of Belarus. Journal of the Belarusian State University. Ecology. 2020;2:67-77.
5. Logacheva E.N., Petrova E.V., Khalikov A.D., Koroteev A.L. Prenatal diagnosis of congenital hemangioma of soft tissues of the back of the fetus // Radiation diagnostics and therapy. 2022. Vol. 13, No. 2. pp. 94-99. DOI: <http://dx.doi.org/10.22328/2079-5343-2022-13-2-94-99>
6. Majidova, E., & Ergasheva, N. Anomalies of spinal cord and spine development in children // Catalog of monographs, (2023). 1(1), 1-201. retrieved from <https://inlibrary.uz/index.php/monographs/article/view/19758>
7. Morozov S.L., Polyakova O.V., Yanovskaya N.V., Zvereva A.V., Dlin V.V. Spina bifida. modern approaches and opportunities for diagnosis, treatment and rehabilitation. Practical medicine, (2020). 18 (3), 32-37.
8. Khabibov I.M., Berdiev R.N. Congenital malformations of the neural tube – spina bifida (spinal hernia) in the Republic of Tajikistan. Healthcare in Tajikistan. 2023;(3):74-79.
9. Asemi-Rad A, Heidari Z, Mahmoudzadeh-Sagheb H, Mehdipour Y, Moudi B, Sheibak N, Ebrahimi S. "Prevalence of congenital anomalies and related factors in live births in Zahedan, Southeast of Iran: A cross-sectional study," // J Reprod BioMed 2023; 21: 647-656.
10. Hassan Aboughalia, Sakura Noda, Teresa Chapman, Margarita V. Revzin, Gail H. Deutsch, Samuel R. Browd, Douglas S. Katz, and Mariam Moshiri Multimodality Imaging Evaluation of Fetal Spine Anomalies with Postnatal Correlation // RadioGraphics, 2021, № 7(41), 2176-2192
11. Monteiro D, Sarmento Gonçalves I, Godinho C, et al Prenatal diagnosis of fetal hemivertebra at 12 weeks of gestationBMJ Case Reports CP 2022;15:e251293.
12. Trapp, B., de Andrade Lourenção Freddi, T., de Oliveira Morais Hans, M., Fonseca Teixeira Lemos Calixto, I., Fujino, E., Alves Rojas, L. C., Burlin, S., Cerqueira Costa, D. M., Carrete Junior, H., Abdala, N., Tobaru Tibana, L. A., Takehara, E. T., & Dalul Gomez, G. A Practical Approach to Diagnosis of Spinal Dysraphism. Radiographics: a review publication of the Radiological Society of North America, Inc, (2021). 41(2), 559-575.