ISSN 3060-4567

# BURDENED OBSTETRIC AND GYNECOLOGICAL HISTORY AS A RISK FACTOR FOR THE DEVELOPMENT OF PERINATAL ENCEPHALOPATHY OF NEWBORNS

***Nabieva Shokhista Mustafaevna***

*Assistant of the Department of Pediatrics and Neonatology Samarkand State Medical University Samarkand, Uzbekistan.*

***Abstract:*** *90 newborns with moderate to severe perinatal encephalopathy were examined.*

*The analysis of the obtained data showed that the occurrence and development of the severity of perinatal encephalopathy depends on the presence and frequency of pathology of obstetric and gynecological history, the course of pregnancy and childbirth. Changes in the state of the central nervous system, particularly perinatal encephalopathy, may further affect the health of the child, and a late diagnosis may lead to a complicated and prolonged course of the disease.*

*In connection with the above, 90 children were selected from the total number of newborns, and two groups were formed: Group I, consisting of 50 newborns with moderate perinatal encephalopathy, and Group II, consisting of 40 newborns with severe perinatal encephalopathy.*

***Key words:*** *perinatal encephalopathy, epistatus, decortication, decerebration, nystagmus, gestosis, abortion, rapid delivery.*

**Relevance.**

Perinatal encephalopathy in newborns plays an important role in the major issues of neonatology. From the first days of pregnancy, complex metabolic interactions occur between the fetus and the maternal body, which determine the course of pregnancy, the development of the intrauterine fetus, and the health of the newborn. Despite the development and application of modern preventive and therapeutic measures, perinatal encephalopathy occurs in 5-30% of newborns and

is one of the leading causes of neonatal morbidity and subsequent disability. The frequency and structure of clinical syndromes and symptoms of perinatal central nervous system (CNS) damage in newborns show a clear dependence on the mother's obstetric history and impact the quality of life, further development, and the formation of various neurological impairments, which, in severe cases, may lead to disability.

To reduce morbidity, disability, and infant mortality, as well as to develop effective diagnostic and treatment methods, it is essential to study the presence and frequency of a complicated obstetric and gynecological history, along with the course of pregnancy and childbirth, as risk factors for the development of perinatal encephalopathy in newborns.

**The purpose of the study** is to investigate the presence and frequency of a complicated obstetric and gynecological history, as well as the course of pregnancy and childbirth, in newborns with perinatal encephalopathy, in order to develop effective methods for diagnosing and treating the disease.

**Research Materials and Methods**

In accordance with the objectives outlined above, 90 children with moderate and severe perinatal CNS lesions were selected from the total number of newborns through random sampling. These children were admitted to the Department of Neonatal Pathology and the Neonatal Intensive Care Unit of the Regional Children's Multidisciplinary Medical Center, which serves as the clinical base for the Department of Pediatrics and Neonatology at Samarkand Medical University.

Two groups were formed: Group I, consisting of 50 newborns with moderate perinatal encephalopathy, and Group II, consisting of 40 newborns with severe perinatal encephalopathy.

**Results of the Study**

The severity criteria were determined based on generally accepted indicators. In cases of grade II (moderate) perinatal encephalopathy in newborns, the following symptoms were observed:

1. Depression and/or excitation of the central nervous system (lasting more than 7 days)
2. Seizures
3. Intracranial hypertension
4. Vegetative visceral disorders

In cases of grade III (severe) perinatal encephalopathy in newborns, the following symptoms were observed:

5. Progressive loss of cerebral activity lasting over 10 days
6. Progressive neurological deterioration: oppression → coma → arousal → seizures → oppression → seizures → coma
7. Seizures (including possible status epilepticus)
8. Brain stem dysfunction (loss of reflexes, sensory impairment, conduction and motor function disturbances, appearance of nystagmus)
9. Decortication (disappearance of conditioned reflexes)
10. Decerebration (persistent generalized muscle tension, primarily in the extensor muscles of the spine and extremities, accompanied by trismus, head tilting, and opisthotonus)
11. Vegetative-visceral disorders (frequent regurgitation, intestinal colic, respiratory rhythm disorders, insufficient weight gain, skin discoloration (increased vascular pattern or pallor), thermoregulation issues)
12. Progressive intracranial hypertension

**Analysis of Maternal History**

Upon analyzing the maternal histories of patients in Groups I and II with perinatal encephalopathy, it was found that all women had received regular monitoring during pregnancy by an obstetrician-gynecologist at family polyclinics near their place of residence.

Regarding pregnancy parity, the following findings were observed:

- In Group I (moderate perinatal encephalopathy), 18 (75%) women had three or more pregnancies, and 6 (25%) women had two pregnancies.

- In Group II (severe perinatal encephalopathy), 20 (76.9%) women were primiparous (had one pregnancy), and 6 (23.0%) had two or three pregnancies, as shown in Table 1.1.

Table 1.1.

Distribution of mothers of newborns by the number of pregnancies

| Pregnancy | I Group n=50 | | II Group n=40 | |
|---|---|---|---|---|
| | Abs. | % | Abs. | % |
| 1st pregnancy | - | - | 20 | 76,9 |
| 2nd pregnancy | 6 | 25,0 | 6 | 23,0 |
| 3rd and more pregnancies | 18 | 75,0 | 6 | 23,0 |

When analyzing the age of mothers of newborns in the studied groups, it was found that the age range was similar across all groups, with mothers being between 18 and 40 years old (see Table 1.2 and Figure 1.2.1).

Table 1.2

The age composition of mothers of newborns in the compared groups

| Age | I Group n=50 | | II Group n=40 | |
|---|---|---|---|---|
| | Abs. | % | Abs. | % |
| 18-19 years | 7 | 14,0 | 5 | 12,5 |
| 20-25 years | 6 | 12,0 | 9 | 22,5 |
| 26-30 years | 24 | 48,0 | 17 | 42,5 |
| 31-35 years | 7 | 14,0 | 4 | 10 |
| 36 years and more | 6 | 12,0 | 5 | 12,5 |
| TOTAL: | 50 | 100,0 | 40 | 100 |

At the same time, the average age of mothers in both groups was approximately the same, averaging 28.5 ± 0.7 years in Group I and 25.4 ± 1.1 years in Group II.

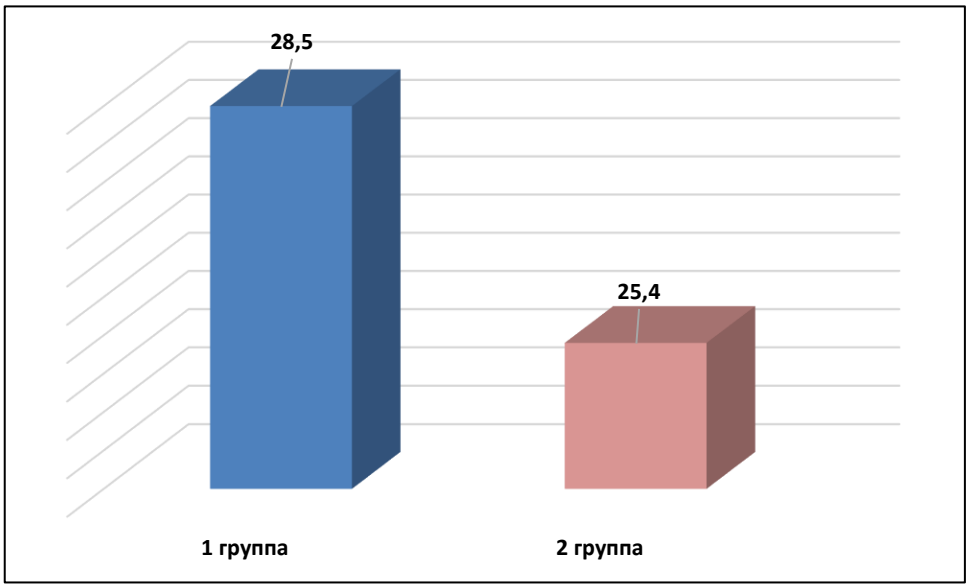


Figure 1.2.1. Indicators of the mothers' ages in the children of the compared groups.

When examining the frequency of obstetric and gynecological histories, it was found that nearly all women in Group I had a history of gynecological issues, with 24 (48.06%) cases, whereas in Group II, 28 (70.0%) mothers had a history of obstetric complications.

The obstetric and gynecological history of women in the comparison groups revealed issues such as irregular menstrual cycles, acute respiratory viral infections during the second and third trimesters of pregnancy, urinary tract infections, and more. At the same time, medical abortions, spontaneous abortions, and terminations of pregnancy for medical reasons were more commonly observed in the group of mothers with severe encephalopathy (Table 1.3). However, threatening pregnancy termination and gestosis occurred with the same frequency in both groups.

Table 1.3

Obstetric history of mothers of newborns in the observed groups

| Indicators | I Group n=50 | | II Group n=40 | |
|---|---|---|---|---|
| | Abs. | % | Abs. | % |
| Medical abortion | 5 | 10,0 | 9 | 22,5 |
| Spontaneous abortion | 7 | 15,0 | 13 | 32,5 |
| Threat of miscarriage | 9 | 18,0 | 10 | 25,0 |
| Abortion for medical reasons | 9 | 18,0 | 17 | 42,5 |
| Gestosis in pregnant women | 24 | 48 | 23 | 57,5 |

**Conclusions:**

The study demonstrated that the most significant risk factors for the development of perinatal encephalopathy in newborns include abortions, the threat of pregnancy termination, gestosis in pregnant women, and rapid childbirth. Analysis of the obtained data revealed that the occurrence and development of moderate and severe perinatal encephalopathy are influenced by the presence and frequency of complications in the obstetric and gynecological history, as well as the course of pregnancy and childbirth. Changes in the central nervous system may further impact the child's health. If diagnosed late, the disease may present with a complicated and prolonged course of perinatal encephalopathy, which can affect the child's further development and lead to various forms of nervous system damage. In severe cases, this can result in disability or mortality.

**REFERENCE:**

1. Alekhine, M. N. (2018). The importance of echocardiography with contrast enhancement of the left chambers of the heart in clinical practice. Cardiology, 58(11), 53-62.

2. Agaeva, Z. (2017). Ultrasound diagnostics of cerebral circulation disorders in the early neonatal period with asphyxia of newborns. Kuban Scientific Medical

Bulletin, 2.

3. Axelrod, A. S., Chomakhidze, P. Sh., & Syrkin, A. L. (2016). Holter ECG monitoring: Opportunities, difficulties, and errors.

4. Barbarash, O. L., & Usoltseva, E. N. (2015). Congenital heart defects and pregnancy. Women's Health Problems, 10(3), 45-55.

5. Afonina, I. A., & Naumenko, E. I. (2019). Electrocardiography in children with extrasystoles. Materials, 100, 130.

6. Bokeria, L. A., et al. (2015). Echocardiographic predictors of the severity of the course of the early postoperative period in patients after surgical myocardial revascularization. Anesthesiology and Intensive Care, 60(5).

7. Джураев Ж. Д., Абдукадирова Ш. Б., Мамаризаев И. К. HISTORICAL, CLINICAL, LABORATORY AND INSTRUMENTAL CHARACTERISTICS OF HEMORRHAGIC DISEASE OF NEWBORNS //УЗБЕКСКИЙ МЕДИЦИНСКИЙ ЖУРНАЛ. – 2024. – Т. 5. – №. 2.

8. Bubnevich, T. E., Ivkina, S. S., & Zaryankina, I. (2016). Syndrome of maladaptation of the cardiovascular system in newborns: Studies and methodical manual. Gomel: GomSMU, 40 p.

9. Nabieva, Sh. M. (2024). The practical significance of instrumental diagnosis of the state of the cardiovascular system in newborns with perinatal damage to the central nervous system. International Modern Scientific and Practical Journal, 16(100), Part 1, 161-166.

10. Nabieva, Sh. M. (2024). Markaziy asab tizimining perinatal zararlanishi bilan yangi tugilgan chakaloklarda yurak kontomir tizimining instrumental diagnostics amali akhamiyati. BIOLOGIYA VA KIMYO FANLARI ILMIY JURNALI 23 Iyun / 2024 YIL / 6– SON

11. Sirojiddinova X.N., Abduxalik-zade G.A., Nabiyeva Sh. M., Rustamova X.X. Clinical symptoms and features of the course of respiratory infection in frequently sick and episodically sick children. IJIEMR Transactions, online available on 11th April 2021 Vol 10. On page 122-125.

ISSN 3060-4567

12. Sirojiddinova X.N., Nabieva Sh.M., Ortikboyeva N.T. Intrauterine infection as a developmental factor perinatal pathology // Central asian journal of medical and natural sciences Volume: 02 Issue: 01 | Jan-Feb 2021 ISSN: 2660-4159. On page 107-111.

13. Sirojiddinova X.N., Ikromova Z.X., Nabiyeva Sh.M., Ortikbayeva N.T., Abdullayeva G.D. Metabolic Changes Following Post-Hypoxic Complications in Newborns // International Journal of Current Research and Review DOI: http://dx.doi.org/10.31782/IJCRR.2020.122229. Scopus. On page 173-177.

14. Sirojiddinova X.N., Abduxalik-zade G.A., Nabiyeva Sh. M., Rustamova X.X. Clinical symptoms and features of the course of respiratory infection in frequently sick and episodically sick children. IJIEMR Transactions, online available on 11th April 2021 Vol 10. On page 122-125.