



New Day in Medicine
Новый День в Медицине

NDM



TIBBIYOTDA YANGI KUN

Ilmiy referativ, marifiy-ma'naviy jurnal



AVICENNA-MED.UZ



ISSN 2181-712X.
EiSSN 2181-2187

3 (65) 2024

Сопредседатели редакционной коллегии:

**Ш. Ж. ТЕШАЕВ,
А. Ш. РЕВИШВИЛИ**

Ред. коллегия:

М.И. АБДУЛЛАЕВ
А.А. АБДУМАЖИДОВ
Р.Б. АБДУЛЛАЕВ
Л.М. АБДУЛЛАЕВА
А.Ш. АБДУМАЖИДОВ
М.А. АБДУЛЛАЕВА
Х.А. АБДУМАДЖИДОВ
М.М. АКБАРОВ
Х.А. АКИЛОВ
М.М. АЛИЕВ
С.Ж. АМИНОВ
Ш.Э. АМОНОВ
Ш.М. АХМЕДОВ
Ю.М. АХМЕДОВ
С.М. АХМЕДОВА
Т.А. АСКАРОВ
М.А. АРТИКОВА
Ж.Б. БЕКНАЗАРОВ (главный редактор)
Е.А. БЕРДИЕВ
Б.Т. БУЗРУКОВ
Р.К. ДАДАБАЕВА
М.Н. ДАМИНОВА
К.А. ДЕХКОНОВ
Э.С. ДЖУМАБАЕВ
А.А. ДЖАЛИЛОВ
Н.Н. ЗОЛотова
А.Ш. ИНОЯТОВ
С. ИНДАМИНОВ
А.И. ИСКАНДАРОВ
А.С. ИЛЬЯСОВ
Э.Э. КОБИЛОВ
А.М. МАННАНОВ
Д.М. МУСАЕВА
Т.С. МУСАЕВ
Ф.Г. НАЗИРОВ
Н.А. НУРАЛИЕВА
Ф.С. ОРИПОВ
Б.Т. РАХИМОВ
Х.А. РАСУЛОВ
Ш.И. РУЗИЕВ
С.А. РУЗИБОЕВ
С.А.ГАФФОРОВ
С.Т. ШАТМАНОВ (Кыргызстан)
Ж.Б. САТТАРОВ
Б.Б. САФОЕВ (отв. редактор)
И.А. САТИВАЛДИЕВА
Д.И. ТУКСАНОВА
М.М. ТАДЖИЕВ
А.Ж. ХАМРАЕВ
Д.А. ХАСАНОВА
А.М. ШАМСИЕВ
А.К. ШАДМАНОВ
Н.Ж. ЭРМАТОВ
Б.Б. ЕРГАШЕВ
Н.Ш. ЕРГАШЕВ
И.Р. ЮЛДАШЕВ
Д.Х. ЮЛДАШЕВА
А.С. ЮСУПОВ
Ш.Ш. ЯРИКУЛОВ
М.Ш. ХАКИМОВ
Д.О. ИВАНОВ (Россия)
К.А. ЕГЕЗАРЯН (Россия)
DONG JINCHENG (Китай)
КУЗАКОВ В.Е. (Россия)
Я. МЕЙЕРНИК (Словакия)
В.А. МИТИШ (Россия)
В.И. ПРИМАКОВ (Беларусь)
О.В. ПЕШИКОВ (Россия)
А.А. ПОТАПОВ (Россия)
А.А. ТЕПЛОВ (Россия)
Т.Ш. ШАРМАНОВ (Казахстан)
А.А. ЩЕГОЛОВ (Россия)
Prof. Dr. KURBANHAN MUSLUMOV (Azerbaijan)
Prof. Dr. DENIZ UYAK (Germany)

**ТИББИЁТДА ЯНГИ КУН
НОВЫЙ ДЕНЬ В МЕДИЦИНЕ
NEW DAY IN MEDICINE**

*Илмий-рефератив, маънавий-маърифий журнал
Научно-реферативный,
духовно-просветительский журнал*

УЧРЕДИТЕЛИ:

**БУХАРСКИЙ ГОСУДАРСТВЕННЫЙ
МЕДИЦИНСКИЙ ИНСТИТУТ
ООО «ТИББИЁТДА ЯНГИ КУН»**

Национальный медицинский
исследовательский центр хирургии имени
А.В. Вишневского является генеральным
научно-практическим
консультантом редакции

Журнал был включен в список журнальных
изданий, рецензируемых Высшей
Аттестационной Комиссией
Республики Узбекистан
(Протокол № 201/03 от 30.12.2013 г.)

РЕДАКЦИОННЫЙ СОВЕТ:

М.М. АБДУРАХМАНОВ (Бухара)
Г.Ж. ЖАРЫЛКАСЫНОВА (Бухара)
А.Ш. ИНОЯТОВ (Ташкент)
Г.А. ИХТИЁРОВА (Бухара)
Ш.И. КАРИМОВ (Ташкент)
У.К. КАЮМОВ (Тошкент)
Ш.И. НАВРУЗОВА (Бухара)
А.А. НОСИРОВ (Ташкент)
А.Р. ОБЛОКУЛОВ (Бухара)
Б.Т. ОДИЛОВА (Ташкент)
Ш.Т. УРАКОВ (Бухара)

3 (65)

2024

март

www.bsmi.uz

https://newdaymedicine.com E:

ndmuz@mail.ru

Тел: +99890 8061882

Received: 20.02.2024, Accepted: 10.03.2024, Published: 20.03.2024

UDC 613.95-616:248-616.8-009

ANAMNESTIC AND CLINICAL-FUNCTIONAL INDICATORS IN CHILDREN WITH BRONCHIAL ASTHMA DUE TO THE CONSEQUENCES OF PERINATAL DAMAGE TO THE CENTRAL NERVOUS SYSTEM

Khaidarova Sarvinoz Haydarjonovna <https://orcid.org/0000-0002-2840-6016>
Mavlyanova Zilola Farkhadovna <https://orcid.org/00165-2134-7222-1978>
Sharipov Rustam Khaitovich <https://orcid.org/000000025594838X>
Ashurov Rustamjon Furkatovich Email: AshurovR@mail.ru

Samarkand State Medical University, 140100 Uzbekistan, Samarkand, A. Temura street 18 Phone number: (866)233-08-41 E-mail: sammu@sammu.uz

✓ *Resume*

The work studied the anamnestic and clinical-functional features of the course of bronchial asthma in children with consequences of perinatal damage to the central nervous system. The article presents data from a comprehensive examination of 72 children aged 5 to 14 years with a diagnosis of asthma. Of these, 42 (58.3%) children with bronchial asthma due to the consequences of perinatal damage to the central nervous system made up the main group. The control group included 30 children (41.7%) with asthma without concomitant neurological symptoms, comparable to the main group by gender and age. The average age of the children was 10.2 ± 0.78 years. To identify the characteristics of the course of asthma with concomitant neurological symptoms, an in-depth assessment of anamnestic data and clinical examination was carried out; all patients underwent spirometry and MSCT of the chest organs.

Key words: bronchial asthma, perinatal lesions, central nervous system, children, family history.

АНАМНЕСТИЧЕСКИЕ И КЛИНИКО-ФУНКЦИОНАЛЬНЫЕ ПОКАЗАТЕЛИ У ДЕТЕЙ С БРОНХИАЛЬНОЙ АСТМОЙ НА ФОНЕ ПОСЛЕДСТВИЙ ПЕРИНАТАЛЬНОГО ПОРАЖЕНИЯ ЦЕНТРАЛЬНОЙ НЕРВНОЙ СИСТЕМЫ

Хайдарова Сарвиноз Хайдаржоновна
Мавлянова Зилола Фархадовна
Шарипов Рустам Хаитович
Ашуров Рустамжон Фуркатович

Самаркандский государственный медицинский университет, 140100 Узбекистан, г. Самарканд, ул. А. Темура, 18 Телефон: (866)233-08-41 E-mail: sammu@sammu.uz

✓ *Резюме*

В работе проведено изучение анамнестических и клиничко-функциональных особенностей течения бронхиальной астмы у детей с последствиями перинатального поражения центральной нервной системы. В статье приведены данные комплексного обследования 72 детей в возрасте от 5 до 14 лет с диагнозом бронхиальная астма. Из них 42 (58,3%) ребенка с бронхиальной астмой на фоне последствий перинатального поражения центральной нервной системы составили основную группу. В группу контроля вошли 30 детей (41,7%) с бронхиальной астмой без сопутствующей неврологической симптоматики, сопоставимые с основной группой по полу и возрасту. Средний возраст детей составил $10,2 \pm 0,78$ лет. Для выявления особенностей течения бронхиальной астмы при сопутствующей неврологической симптоматике проведена углубленная оценка анамнестических данных и клинического обследования, всем пациентам проведены спирометрия, МСКТ органов грудной клетки.

Ключевые слова: бронхиальная астма, перинатальное поражение, центральная нервная система, дети, семейный анамнез.

MARKAZIY ASAB TIZIMINING PERINATAL SHIKASTLANISHI OQIBATLARI FONIDA BRONXIAL ASTMA BILAN OG'RIGAN BOLALARDA ANAMNESTIK VA KLINIK-FUNKSIONAL KO'RSATKICHLAR

Xaydarova Sarvinoz Xaydarjonovna
Mavlyanova Zilola Farxadovna
Sharipov Rustam Xaitovich
Ashurov Rustamjon Furqatovich

Samarqand davlat tibbiyot universiteti, 140100 O'zbekiston, Samarqand, A.Temura ko'chasi 18
Telefon raqami: (866)233-08-41 E-mail: sammu@sammu.uz

✓ *Rezyume*

Ilmiy ishda markaziy asab tizimining perinatal shikastlanishi oqibatlari bo'lgan bolalarda bronxial astmaning (BA) anamnestik, klinik va funktsional xususiyatlari o'rganildi. Maqolada BA tashxisi qo'yilgan 5 yoshdan 14 yoshgacha bo'lgan 72 bolalarni har tomonlama tekshirish ma'lumotlari keltirilgan. Ulardan 42 (58,3%) bronxial asthma bilan og'rigan bolalar markaziy asab tizimining perinatal shikastlanishi fonida asosiy guruhni tashkil etdi. Taqqoslash guruhiga asosiy guruhga jinsi va yoshi bilan taqqoslanadigan neurologik simptomlarsiz BA bilan kasallangan 30 bola (41,7%) kiritilgan. Bolalarning o'rtacha yoshi $10,2 \pm 0,78$ yoshini tashkil etdi. Birgalikda neurologik alomatlar fonida bronxial astmaning xususiyatlarini aniqlash uchun anamnestik ma'lumotlar va clinic tekshiruv chuqur o'rganilib baxolandi, barcha bemorlarga spirometria, ko'krak qafasi MSKT o'tkazildi.

Kalit so'zlar: bronxial asthma, perinatal shikastlanish, markaziy asab tizimi, bolalar, oilaviy anamnez.

Relevance

Bronchial asthma (BA) is a global problem that remains relevant throughout the world today. It is called one of the diseases of civilization, since the prevalence of asthma in modern society is constantly growing. This is a disease that, if manifested in childhood, then in 60-80% of cases continues into adulthood [2,3,9]. Numerous environmental problems, the rapid development of industry and agriculture, the use of a huge range of different chemicals in everyday life, the often uncontrolled use of medications and many other unfavorable factors negatively affect the child's health, and the respiratory system is one of the most vulnerable [4,15].

According to WHO experts, asthma is the most common chronic disease among children (The global asthma report, 2014). In Russia, 6.9% of the country's population suffers from asthma. Moreover, 15% of them are children under 11 years of age [2,4,15]. According to the literature, in approximately 30% of cases, asthma resolves by adolescence and adulthood [9,17,22,24].

Quite often, the focus is on the symptoms of asthma, without taking into account the presence of concomitant pathology, which can aggravate the course of the disease and provoke attacks. A number of studies demonstrate that patients with bronchial asthma, which is difficult to treat, have severe diseases of the paranasal sinuses, pathology of the gastrointestinal tract, and recurrent respiratory infections [6,10].

It has been proven that perinatal damage contributes to the frequent development of bronchial obstruction in children of the first years of life [6,8,10]. According to modern literature, newborns who have suffered hypoxia-ischemia in the perinatal period in subsequent periods of childhood have neurological deficits of varying severity in the form of delayed neuropsychic and motor development, minimal brain dysfunction, disorders of social adaptation, cerebral palsy, epilepsy [11,13,15]. At the same time, children and adolescents with consequences of perinatal damage to the central nervous system often have functional changes in various organs and systems [10,16,18]. Hypoxia and prematurity are factors in the imperfection of the newborn's immune response, leading to frequent infectious diseases that disrupt the neurogenic regulation of the bronchi [11,15,17]. Some studies have noted a correlation between the depth of damage to the central nervous system (CNS) and the severity of AD symptoms caused by more severe neuro-immune-endocrine imbalance [14,20,21].

It has been revealed that the majority of children with bronchial asthma have a history of perinatal damage to the central nervous system [10,13]. Perinatal damage to the central nervous system increases the risk of developing bronchial asthma in children of preschool age by 3.4 times. It is the violations of the mechanisms of neuro-vegetative regulation of the cardiorespiratory system that arise as a result of adverse nonspecific influences in perinatal ontogenesis, along with hereditary and constitutional predisposition to atopy, that have a significant impact on the formation of bronchial asthma in preschool children [12,13,14,20,22]. It has been established that the early onset of asthma in children is facilitated by intrauterine sensitization of the fetus, which can occur during gestosis of pregnancy, acute viral or bacterial infections, exacerbation of chronic inflammatory diseases, among which, in particular, gestosis of pregnancy are a significant risk factor for the development of atopic diseases [3,11,16].

Thus, neurological and psychopathological disorders that develop as a result of perinatal damage to the central nervous system naturally close the vicious circles of the pathogenesis of AD, limiting the patient's adaptive capabilities throughout life. In this regard, the study of clinical and dynamic features of psychoneurological disorders in children with asthma is a very urgent task, as it can help improve methods of prevention and treatment of this disease [13,18,19,23].

That is why today the attention of researchers is focused on the mechanisms of early development of asthma, the search for factors that determine the persistence of clinical symptoms and the severity of the disease, which could determine ways of prevention [7,15,17]. However, in order to fully reveal the pathogenetic mechanisms of the formation of asthma in children, including against the background of the consequences of perinatal damage to the central nervous system, a comprehensive examination using modern diagnostic methods is necessary.

Purpose of the study. Based on anamnestic and clinical-functional parameters, to study the features of the course of bronchial asthma in children with consequences of perinatal damage to the central nervous system.

Material and methods

During the work, 72 children aged 5 to 14 years with a diagnosis of asthma were examined; the average age of the patients was 10.2 ± 0.78 years. The groups of children with bronchial asthma included in the study were formed on the basis of international consensus documents. Patients underwent a clinical examination, which included anamnesis, diagnostics of organs and systems, assessment of the severity of the disease, and identification of concomitant pathologies.

When the child was admitted to the hospital, laboratory and instrumental studies were performed (complete blood count, spirometry, MSCT of the chest organs). Depending on the anamnestic data, the children were divided into two groups: 42 children (58.3%) with bronchial asthma due to the consequences of perinatal damage to the central nervous system made up the main group. The control group consisted of 30 children with asthma (41.7%) without concomitant neurological symptoms. A similar amount of research was also carried out on 20 practically healthy children of identical age who made up the control group.

Verification of the diagnosis was carried out according to the classification of the main clinical forms of bronchopulmonary diseases in children, approved at a special meeting of the XVIII National Congress on Respiratory Diseases (2009). In 100% of cases, the diagnosis of bronchial asthma was confirmed by MSCT examination of the chest organs.

Statistical analysis was carried out using Excel - 2007 software according to generally accepted methods.

Results and discussion

A gender assessment of the incidence of asthma in observation groups showed that in the main group there were twice as many boys as girls - 66.7% and 33.3%, respectively. A slightly different picture was determined in the control group: boys - 56.7%, and girls - 43.3%. The data obtained indicate that the predominance of males in the main group is due to the greater vulnerability of the brain in boys, as well as the occurrence of damage to the white matter and intraventricular hemorrhages against the background of hypoxia, along with this there is also a neuroprotective effect of the female sex hormone estrogen. In the main group, there were twice as many children aged 7 to

14 years (n=28; 66.7%) as older adolescents aged 15 to 17 years (n=14; 33.3%). In the control group, there were 18 (60.0%) children aged 7 to 14 years, and 12 (40.0%) aged 15 to 17 years (Table 1).

Table 1

Distribution of sick children by gender and age

Observation group	Floor	Age group		
		Total (n; %)	Young teenagers (7-14 years old)	Older teenagers (15-17 years old)
Main group (n=42)	boys	28 (66.7%)	19 (45.2%)	9 (21.4%)
	girls	14 (33.3%)	9 (21.4%)	5 (11.9%)
Control group (n=30)	boys	17 (56.7%)	10 (33.3%)	7 (23.3%)
	girls	13 (43.3%)	8 (26.7%)	5 (16.7%)

Analysis of the course of the disease among hospitalized children showed a predominance of mild asthma - 40 cases (55.6%), moderate severity - in 32 (44.4%) patients. While the comparative assessment in the observation groups revealed a predominance of moderate severity of the disease among children in the main group - 54.8% (n=23), and in the control group - mild asthma (n=20, 66.7%) (Fig. 1).

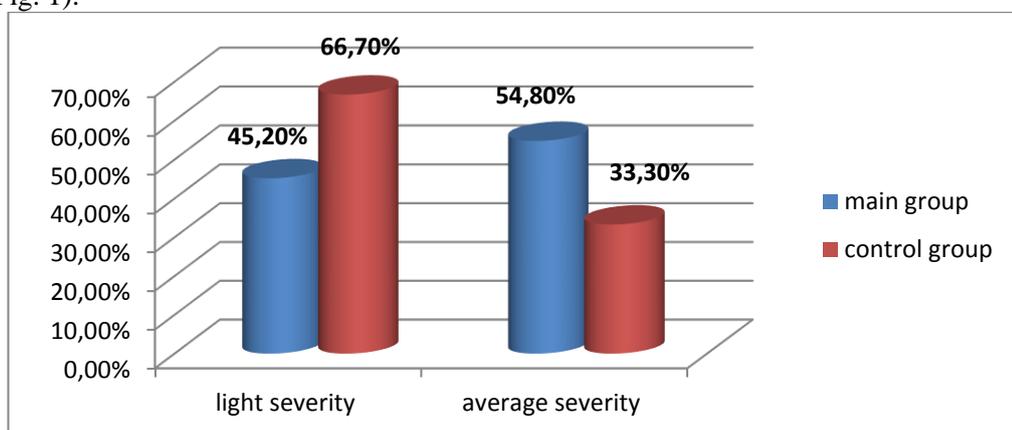


Figure 1. Course of bronchial asthma in observation groups

A study of anamnestic data showed that the duration of the disease was less than 2 years observed in 23 (31.9%) children, more than 2 years - in 49 (68.1%) children. It turned out that the majority of children lived in the city - 53 (73.6%), and 19 (26.4%) were from rural areas. At the same time, a comparative analysis of the duration of the disease indicated a longer course of asthma in the main (69.0%) group than in the control group (30.0%). In the main group, residents of rural areas predominated (71.4%), and in the comparison group, urban residents (66.7%) (Fig. 2).

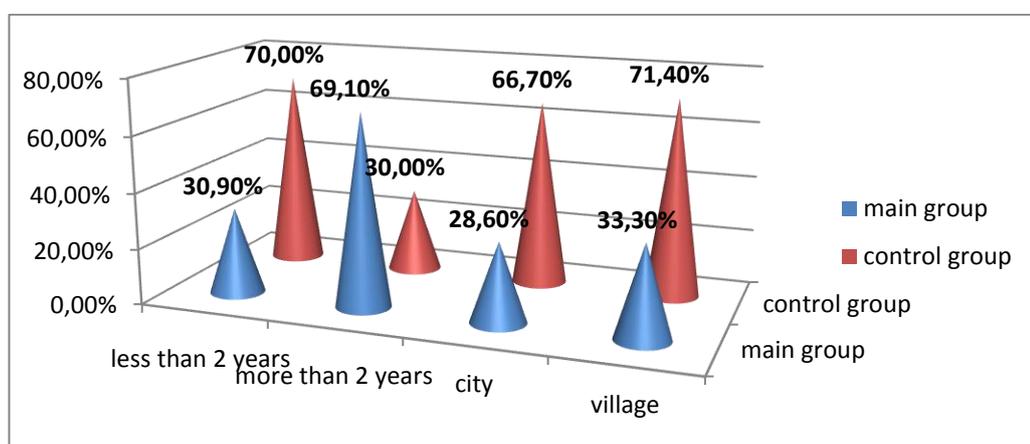


Figure 2. Distribution of patients by duration of illness and place of residence

The studied family history of allergic diseases showed that 44 (61.1%) of the examined children: 22 (52.4%) children of the main group and 22 (73.3%) children of the control group had close relatives with allergic diseases. At the same time, the largest percentage accounted for bronchial asthma (16.7%) - 5 (11.9%) and 7 (25.0%), respectively, in the observation groups. Atopic dermatitis (9.5% in the main group and 10.0% in the comparison group) and rhinitis - 7.1% and 10.0%, respectively, in the observation groups - were noted somewhat less frequently in the anamnesis of immediate relatives. In general, patients from the comparison group were 1.5 times higher in terms of allergic predisposition factors, which indicates the risk of asthma in children with perinatal damage to the central nervous system and without a burdened allergic history (Table 2).

Table 2

Family history data in children with bronchial asthma

Family history	Total (n=72)	Control group (n=30)	Main group (n=42)
Atopic dermatitis	7 (9.7%)	3 (10.0%)	4 (9.5%)
Allergic rhinitis	6 (8.3%)	3 (10.0%)	3 (7.1%)
Bronchial asthma	12 (16.7%)	7 (25.0%)	5 (11.9%)
Hay fever	4 (5.6%)	2 (6.7%)	2 (4.8%)
Hives	6 (8.3%)	3 (10.0%)	3 (7.1%)
Quincke's edema	3 (4.2%)	1 (3.3%)	2 (4.8%)
Drug allergy	6 (8.3%)	3 (10.0%)	3 (7.1%)
Total	44 (61.1%)	22 (73.3%)	22 (52.4%)

The main complaints during hospitalization of patients in the hospital were expiratory shortness of breath (68.4% and 48.2% in the main and comparison groups, respectively). Dry cough was significantly more common in the main group - 62.8%, while productive cough, on the contrary, was significantly more common in the comparison group - 48.6%. In the same group of children, the cough was significantly more likely to be effective. An increase in expiratory shortness of breath and wheezing at the beginning of the disease was recorded in 48.7% of cases in children with asthma who had a history of perinatal central nervous system damage. Also, patients in the main group were characterized by complaints of decreased appetite, weakness, fatigue, lack of air, and symptoms of intoxication - 58.2% of cases. It should be noted that in more than half of the cases these complaints were clearly expressed (Figure 3).

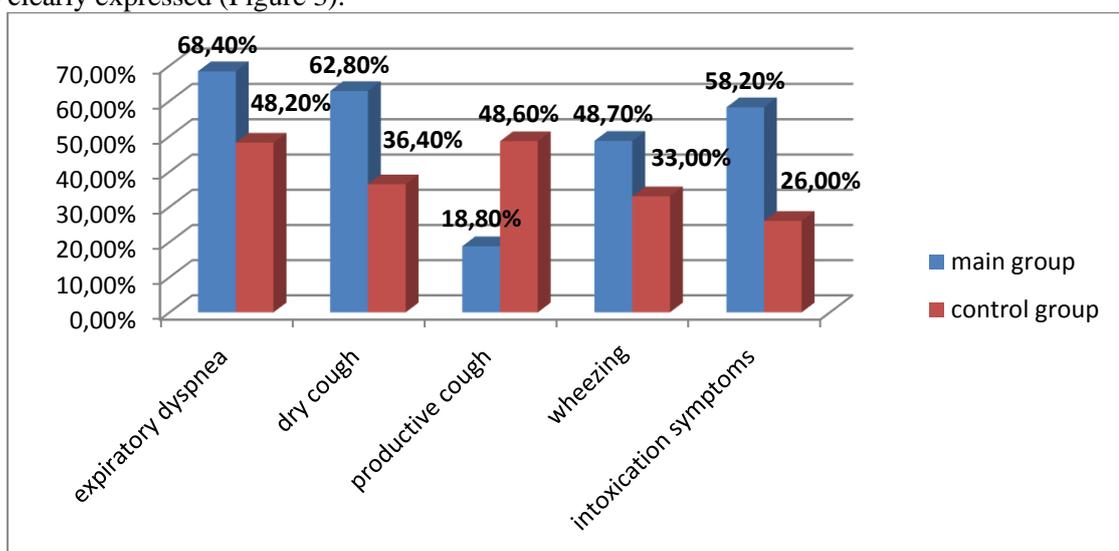


Figure 3. Severity of symptoms in children with bronchial asthma in observation groups

The results of spirometry showed that 18 (42.9%) children of the main group with moderate severity of bronchial asthma had obstructive pulmonary ventilation disorders. At the same time, only 9 (30.0%) children in the comparison group had such disorders. In the majority of children in both groups, the volume forced expiration in 1 second (FEV1) was 55-74 % air, which indicated moderate bronchial obstruction. In 12 (28.6%) children of the main group and 7 (23.3%) children of the comparison group, this indicator decreased to 35-54. At the same time, FEV1/FVC in 24 (57.1%) children of the main group and 11 (36.7%) of the comparison group was reduced to 55-64, which indicated a moderate deviation. In 8 (19.1%) children of the main and 4 (13.3%) control groups, FEV1/FVC was below 54, which indicated a significant decrease in this indicator. The data obtained indicate obstruction that is more pronounced in children with bronchial asthma against the background of the consequences of perinatal damage to the central nervous system.

MSCT of the chest was performed in all patients diagnosed with BA, while increased bloating was detected in 16 (22.2%) children in the study group (of which 11 (26.2%) in the main group and 5 (16.7%) in the comparison group) lungs, as evidenced by the flattening of the domes of the diaphragm, the horizontal arrangement of the ribs, bilateral strengthening of the pulmonary pattern and expansion of the roots.

An analysis of concomitant BA pathology revealed in 38 (52.8%) children of the study groups a pathology in the form of a combination of bronchial asthma with some other allergic disease: in 27 (37.5%) children with BA allergic rhinitis was diagnosed, in 11 (15.3%) patients had atopic dermatitis, 10 (13.9%) children with asthma had hay fever, and 5 (6.9%) had drug allergies. The most pronounced comorbidity of concomitant diseases of an allergic nature was revealed in the comparison group, in which 22 (73.3%) children had one or another allergic disease, versus 38.1% in the main group of children with asthma against the background of the consequences of perinatal damage to the central nervous system (Fig. 4).

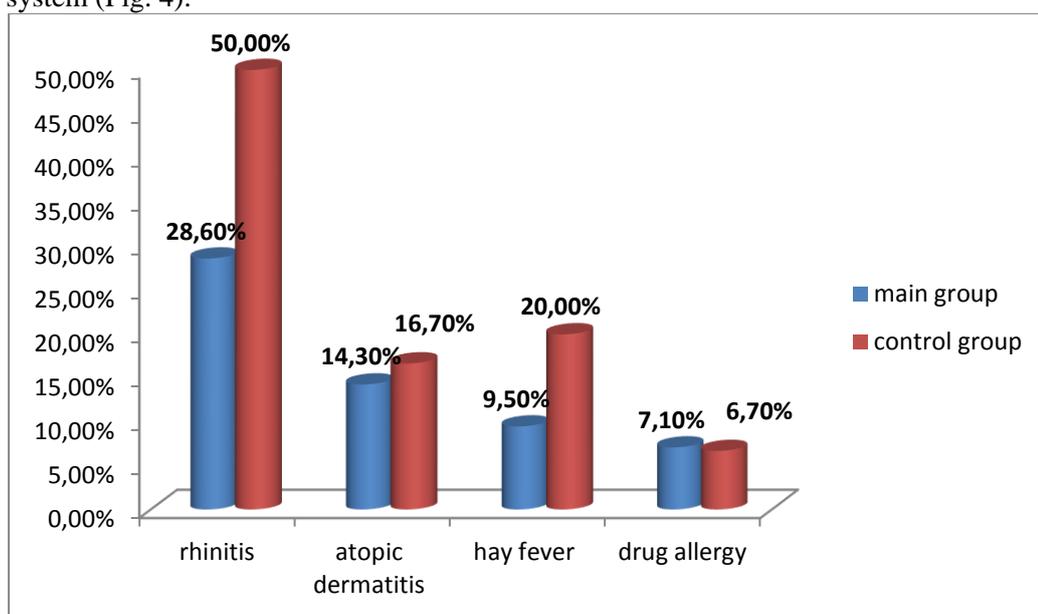


Figure 4. Frequency of occurrence of allergic diseases in observation groups

Conclusions

1. In the development of allergic diseases, especially bronchial asthma in children, hereditary predisposition and living conditions are of great importance.
2. When examining children with bronchial asthma who have consequences of perinatal damage to the central nervous system, special attention should be paid to identifying concomitant pathology, which in some cases can provoke attacks and contribute to a more severe course of the disease.
3. In children with bronchial asthma against the background of the consequences of perinatal damage to the central nervous system, respiratory failure in the form of expiratory shortness of breath, wheezing, lack of air, as well as symptoms of intoxication were recorded much more often. This was also evidenced by the results of spirometry, which indicates a more severe course of the disease in such children.

LIST OF REFERENCES:

1. Abdusalomova M. A., Mavlyanova Z. F., Kim O. A. Orqa miya va umurtka pofonasining b'jin qismining tufruk zharoxatlari bilan bemorlarning diagnostikasida elektronejromiografiyaning j'ri // Jurnal biomedicini i praktiki. – 2022. – T. 7. – №. 2.
2. Baranov A. A. National leadership. Pediatrics / edited by A. A Baranov. - / M.: GEOTAR-Media, 2019 – 1024 pp.
3. Balabolkin I. I. Bronchial asthma in children of the first years of life / I. I. Balabolkin // Russian Pediatric Journal. - 2013. - No. 1. - P.24-28.
4. Baranov A.A. National leadership. Pediatrics / edited by A. A Baranov. - M.: GEOTAR-Media, 2019 – 100 pp.
5. Balabolkin I.I. // Russian pediatric journal. - 2013. - No. 1. - P.32-38.
6. Balabolkin I.I. // Russian Pediatric Journal. - 2013. - No. 1. - P. 98-115.
7. Israelyan Yu.A. Features of the formation and clinical course of broncho-obstructive syndrome in young children with perinatal damage to the nervous system: discand. honey science 14.00.09 / Yu.A. Israelyan. – Nizhny Novgorod, 2015. – 153 pp.
8. Israelyan Yu.A., 2015 Clinical symptoms and severity of bronchial asthma in children. // Russian pediatric journal. - 2015. - No. 3. - P. 66-72.
9. Kaladze N. N., Ezernitskaya A. I., Babak M. L., Gordienko A. I., Khimich N. V. The influence of sanatorium-resort treatment and antiviral therapy on the level of insulin-like growth factor-1 in children with bronchial asthma. // Bulletin of physiotherapy and balneology No. 3, - 2017. - pp. 25-28.
10. Krasnorutskaya O.N., Ledneva V.S. Clinical and biochemical parameters in the diagnosis of developmental disorders in children with consequences of perinatal damage to the nervous system. // Pediatrics. – 2018. - T.97. - No. 3 – pp. 175-179.
11. Karataeva N.A. Clinical and laboratory indicators in assessing the outcomes of bronchial asthma in children / N.A. Karataeva, N. Ch. Abdullaev, L. A. Karataeva // MEDICUS. – 2015. - No. 1. - P. 8-9.
12. Anatolevna K. O., Akbarovna A. M., Mamasharifovich M. S. Zhalolitdinova Shaxnoza Akbarzhon kizi, & Ibragimova Leyla Ilxomovna. (2022). the influence of risk factors on the development of cerebral strokes in children. Open access repository, 8 (04), 179–182.
13. Mavlyanova Z. F., Hajdarova S. H. Aktual'nye voprosy hronicheskogo bronhita u detej // Science and Education. – 2023. – T. 4. – №. 2. – S. 328-337.
14. Lebedenko A. A. Clinical and pharmacoepidemiological monitoring and prediction of the course of bronchial asthma in children: abstract. dis dr med. science: 01/14/08 / Lebedenko Alexander Anatolyevich. – Rostov-on-Don, 2014. – 42 p.
15. Mavlyanova Z. F., Hajdarova S. H., SHaripov R. H. Somatomorfometricheskij status detej s bronhial'noj astmoj // Science and Education. – 2023. – T. 4. – №. 4. – S. 345-352.
16. Murtazaeva O. A. Pathogenetic aspects of severe bronchial asthma: abstract dis . Ph.D. honey. Sciences: 01/14/08 / Murtazaeva Olga Anatolevna. – M., 2012. – 24 p.
17. Malyuzhinskaya N.V. Optimization of pharmacotherapy and prevention of bronchial asthma in young children (pharmacoepidemiology, assessment of basic therapy, new diagnostic and treatment algorithms): abstract. dis. Dr. med. Sciences: 03.14.06 / Malyuzhinskaya Natalya Vladimirovna. – Volgograd, 2011. – 48 p.
18. Malyuzhinskaya N.V., Bronchial asthma in children, treatment and prevention. // Pediatrics. – 2021. - T.2. - No. 5 – pp. 96-100.
19. Mavlyanova Z. F., Ibragimova M. SH. Detskij cerebral'nyj paralich i faktory riska ego vozniknoveniya // Science and Education. – 2023. – T. 4. – №. 2. – S. 42-47.
20. Pavlenko V.A., Melnikova I.M., Mizernitsky Yu.L. Clinical and diagnostic aspects of the prognosis of bronchial asthma in young children. MEDICAL COUNCIL • No. 9, 2017. pp. 70-75.
21. Trepilets S.V., Golosnaya G.S., Trepilets V.M., Kukushkin E.I. Hypoxic-hemorrhagic brain lesions in newborns: the values of determining neurochemical markers, markers of inflammation and apoptosis in the neonatal period and the results of follow-up observation. // Pediatrics. – 2018. – T.97. - No. 1 – pp. 31-37.
22. Abdullaeva N. N., Kim O. A. Klinicheskie osobennosti fokal'no obuslovlennoj simptomaticheskoy visochnoj epilepsii u bol'nyh pozhilogo vozrasta //Dobrohotovskie chteniya. – 2017. – S. 35-37.
23. Lutfillojevna B. G., Farxadovna M. Z., Zohidjonovna R. M. Convulsive Syndrome In Children: Tactics Of Conduct // Journal of biomedicine and practice. – 2022. – T. 7. – №. 1.
24. Khaidarzhonovna K. S., Farkhadovna M. Z., Khaitovich S. R. Features of physical development in children with bronchial asthma // Journal of biomedicine and practice. 2023;8:2.

Entered 02.02.2024