PECULIARITIES OF THE COURSE OF SOME BRONCHOPULMONARY DISEASES IN INFANT CHILDREN IN THE ARAL REGION

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Abstract. *According to our research, among the medical and biological risk factors, maternal anemia during pregnancy is of greatest importance in the development of the pathology of bronchopulmonary diseases. Physical development using the WHO AnthroPlus program (2009) among young children with respiratory system disease, there was a growth deficit in children 1 year of age - 3.8% and in 3 years old - 1.5%, weight deficit 3.8%, was in patients 1 year of age and in 2 years of age 1.5%, 3 years of age 0.7%, it should be noted that in children 1 year of age 3.8% were overweight. In children of the first year of life, the incidence of pneumonia was 64.9%, and in 2 years of age it was 58.5%. Recurrent obstructive bronchitis was more common in children 3 years old - 43.6%.*

Keywords: *children, early age, weight, height, bronchopulmonary pathology*

Relevance. Respiratory diseases occupy a leading place in the structure of childhood morbidity and are the main or competing cause of death in children in the first years of life [1, 2]. Diseases of the respiratory tract present significant diagnostic difficulties due to the non-specificity and uniformity of clinical and radiological symptoms in essentially different diseases, which indicates the importance of the problem and the need to improve the methods of diagnosis, treatment and prevention of bronchopulmonary diseases. Respiratory failure (RF) is a severe complication of respiratory diseases that develops as a result of inefficient gas exchange, impairment of lung ventilation function, or a combination of these processes [3–6]. Early diagnosis of the form of DN in order to effectively correct gas exchange remains an important problem in the treatment of respiratory tract diseases in children. The solution of this problem is most relevant for young children due to the anatomical features of the respiratory tract, which largely determine the severity of DN.

The purpose of this study was to study the clinical and anamnestic indicators of some bronchopulmonary diseases in children early age.

Materials and methods. We examined 168 children of early age living in the Khorezm region with respiratory diseases and 60 children of the same age living in Tashkent. The following methods were used to examine children: learning clinical and anamnestic information, assessment of external minor developmental anomalies, interviews with parents, and analysis of informations from primary medical documents. The survey included an anthropometric study: measurements with the determination of body weight, body length/height, mass-height index. The assessment of the physical development of children was carried out according to the WHO growth standards (2006) using the WHO AnthroPlus program (2009) and was determined by the Z-score values. Statistical processing of the obtained results was carried out using application programs for statistical data processing Statistica ® version 6.0. The significance of differences between the

compared groups was assessed by Studentas criterias. Differences in the compared values were recognized as statistically significant at p< 0.05.

Results and their discussion. When studying the nosological structure of the pathology of bronchopulmonary diseases in young children, there was - recurrent obstructive bronchitis in 1 year of life in children 12.4%, acute obstructive bronchitis 29.5% and acute pneumonia was observed in 64.9%, which coincides with the literature data, with 2- acute obstructive bronchitis 26.9%, recurrent obstructive bronchitis 14.6%, and acute pneumonia 58.5%, according to our research, recurrent obstructive bronchitis 43.6% occurred more often from the age of 3 years, which is shown in diagram No. 1 .

Diagram No. 1
Distribution of children of the main group by pathologies of the respiratory organs
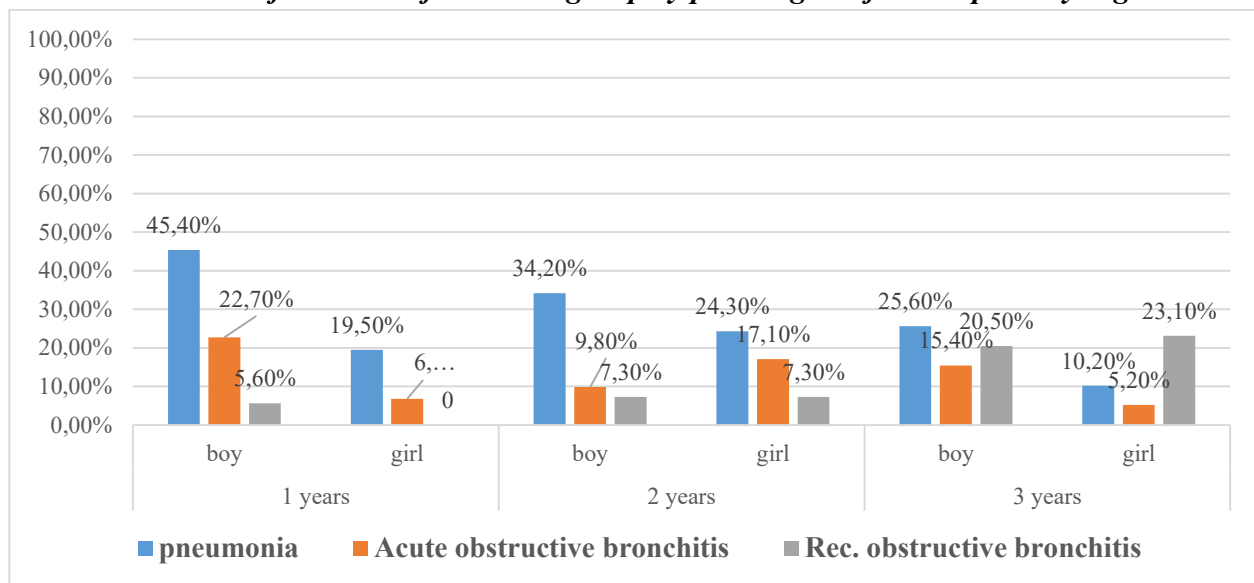
The frequency of occurrence of obstructive bronchitis with a recurrent course is much higher in children of 3 years of age, due to the start of attending kindergartens. When analyzing clinical and anamnestic data in young children, aggravating factors of biological, genealogical and social anamnesis were identified. One of the important factors influencing the development of pathology of the respiratory system is biomedical, it was also found that the proportion of biomedical factors prevailed over social and hygienic factors by 2.8 times. In the obstetric-somatic history of the mother, anemia was of great importance - 63.9% during pregnancy period. Anemia during pregnancy leads to fetal hypoxia, which later on after birth is a trigger leading to secondary immunodeficiency states and various other pathologies in children early age. An important role is played by such a factor as toxicosis of the first half of pregnancy, it occurred in 37.3% of mothers. These studies showed that in children of the 1st main group, 2 times more often than in the control group, mothers had an unfavorable course of the antenatal and / or intranatal periods of development (preeclampsia in the 1st and 2nd half of pregnancy, the threat of premature birth, acute respiratory infection during pregnancy, exacerbation of chronic diseases, maternal anemia, etc.) (in 80.2 and 44.2%, respectively; p<0.05). Pathological course of childbirth occurred in 79% of the 1st group and in 52% of the 2nd group (p < 0.05). In the first group, births by caesarean section were more common (respectively, in 15.4 and 6.6%; p < 0.05); entanglement of the neck with the umbilical cord during childbirth (respectively, in 13.7 and 4.4%; p<0.05); rapid birth (respectively, 8.6% and 4.4%; p<0.05). Premature (at 35-37 weeks) were born 6.8% of children in first group and 11% of children in second group (p < 0.05).

A significant proportion of the influence in diseases of the respiratory system, the presence of chronic pathology (urinary system) in the mother was observed 4.5 times more often than other pathologies and amounted to 15.1%. The bulk of children were born physiologically and amounted to 56.6%, the remaining 43.4% were born by caesarean section. In combination, all of the above factors negatively affect the development of certain diseases and syndromes of the respiratory system.

The main factor in the growth and development of children is nutrition, and the quality of complementary foods introduced. Of the examined children, the majority - 50.6% were breast-fed, 36.2% were formula-fed and 13.2% were mixed-fed. According to our learnings, children who had frequent acute respiratory infections at an early age accounted for 20.4%, and all these children were in formula-fed.

A retrospective analysis of the data revealed that the majority of children were born with normal body weight - 107 (64.4%), in 43 (23.9%) children the body weight at birth differed from the norm, larger children, in 18 (10.8 %) with reduced body weight. The incidence of concomitant diseases in children of the main group showed - dysmetabolic nephropathy 39.8%, atopic dermatitis 27.9%, rickets 18.4%, PCNS 12.5%, the control group functional disorders of the gastrointestinal tract in 5.7% of children, rhinitis 28 .3%, tonsillitis 6.7%, rickets 20%, atopic dermatitis 11.7%, in diagram No. 2, the indicators of the main group.

Diagram No. 2
Analysis of the incidence of concomitant diseases in early aged children of the main group
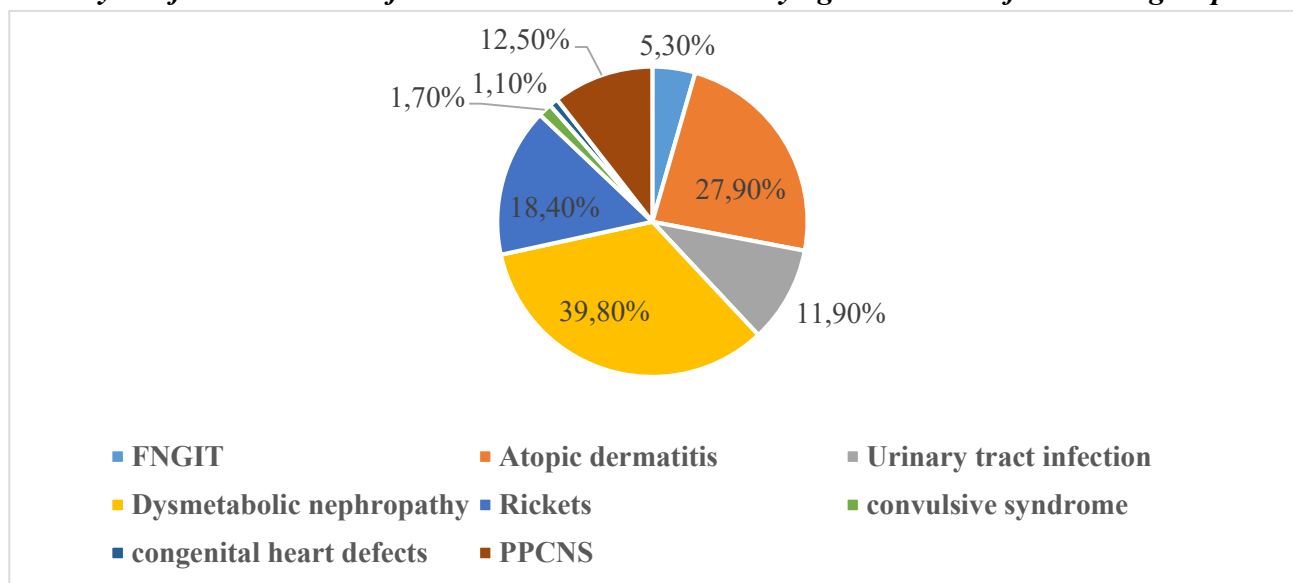
According to our data, the frequency of occurrence of dysmetabolic nephropathy showed high numbers, in turn 27.9% atopic dermatitis was also higher among other comorbidities.

According to our data, high numbers showed the incidence of dysmetabolic nephropathy, in turn, atopic dermatitis was also higher among other comorbidities and amounted to 27.9%.

One of the important socio-hygienic factors is the number of children in the family. Most of the children of the main and control groups were families with 2-3 children (67.5% and 70%), large families with 4 or more children (10.8% and 3.3%), the rest of the family had one child (21.7% and 26.7%). Self-treatment of a child in the family today depends on the frequent use of Internet resources, which at the present stage adversely affects the health of children, in both groups the factor has the most important share of influence (27.2% and 32%). The main role is

played by the residence of a family with a large number of relatives, families living in such conditions were 5.8 times more in the main group.

The assessment of the harmony and pace of physical development was carried out, and when examining children, the rates of physical development of children were also taken into account; in this study of the physical development of children, we divided them into age categories: children of 1 year of age, children of 2 years of age and children of 3 years of age. When analyzing the indicators of physical development by body weight of the main group, the following distribution was revealed: children of 1 year of age accounted for 63% -2+2SD, 33.2% -3SD and 3.8% +3SD, 2 years 76.9% -2+2SD , 23.1% -3SD, from 3 years old 82.3% -2+2SD, 17.7% -3SD, from 2 and 3 years +3SD did not occur. With growth: children of 1 year of age accounted for 65.4% -2+2SD, 31.6% -3SD and 3% +3SD, 2 years 72.3% -2+2SD, 27.7% -3SD, from 3 years 83.8% -2 + 2SD, 16.2% -3SD, and weight-height indices in children of 1 year of age: 63.8% of children are normal, 18.6% of children are -1SD + 1SD, 13% -2 +2SD, 2.3% -3SD and 2.3% +3SD, 2 years old 79.2% of children are normal, 18.5% of children - -1SD+1SD, 2.3% +2SD-2SD, 3 years old 82,2% of children are normal, 7.1% of children - -1CO + 1CO, 10.7% + 2CO-2CO, in 2 and 3 years in the interval -3CO + 3CO was not determined. In the control group in children of 1 year of age, the weight-height index: 65.8% of children are normal, 18.9% of children are -1SD + 1SD, 13.4% -2 + 2SD, 2.3% -3SD and 2.3 % +3SD, 2 years 81.2% of children are normal, 18.5% of children are -1SD + 1SD, 2.3% +2SD-2SD, 4.1% +3SD, 3 years 82.2% of children are normal , 17.3% of children- -1SD + 1SD, 6.7% + 2SD-2SD, + 3SD in 3.9% of children.

In the main group, a harmonious type of physical development was detected in children of 1 year of life 63.8%, in children of 2 years of age 79.2% and 3 years of age 82.2%, and in the control group of 1 year of life 65.8%, in children of 2 years of age 81 .2% and 3 years 82.2% (diagram No. 3).

Diagram No.3
Distribution of children by types of harmony of physical development by age groups
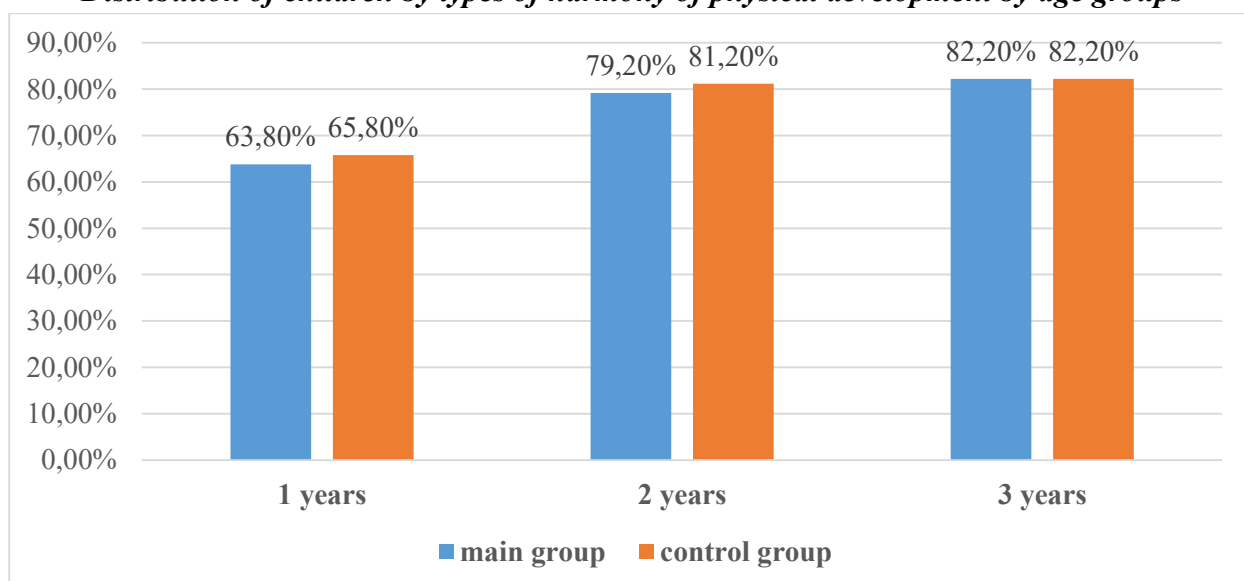
The clinical picture of pathologies differed in children of age groups, the main complaints of children in both groups: increase in body temperature 38-39 °C, cough and weakness. At the same time, in the main group of 45, at the age of 2-3 years (34.6%), a lingering cough that lasts 4 weeks or more, with sputum production, from the same category of children in the control group,

lingering cough was in children of the 3rd group. years was more than 2 times. Cyanosis of the nasolabial triangle was observed in 30% of patients of 1 year of life during physical activity (crying, while feeding), in the control group 27.4%. During the examination, 24.6% of patients had swelling of the wings of the nose and the participation of auxiliary muscles, in the main group , rapid breathing in children was observed in 47%, in the control group 68.3%. In children of the main group, the most common form of dyspnea was mixed 46.4%, expiratory dyspnea-27.4%, inspiratory dyspnea 22%, in the control group mixed form of dyspnea 36.7%, expiratory dyspnea-20%, inspiratory dyspnea 21.7% .

In the main group of children, respiratory failure of 1-2 degrees was observed in 51%, insufficiency of 3 degrees in 4% of patients, in the control group, respiratory failure of 1-2 degrees was observed in 68%, 3-degree was not observed. During auscultation, 100% of children heard hard breathing in both groups, 73% of children had moist rales. Dry wheezing was heard in the main group of 59.2% of children, of which 43.9% of children were diagnosed with obstructive bronchitis, 28.6% of children had pneumonia with obstructive syndrome. In the control group, wet rales were observed in children more than in the main group - 81%. With the obtained laboratory data, some changes in the indicators were revealed; in the main group of children, leukocytosis was 32.7%, C-reactive protein was increased in 66.7%, and calcium (69%) and total protein (50.5%) were reduced. In the control group in children, the same indicators were; leukocytes 20% and C-reactive protein are increased in 53.3%, and calcium (58.3%) and total protein (46.6%) are below the reference values.

Our studies have shown that in young children in the Aral Sea region, the influence of mothers' pregnancy, as an unfavorable course of antenatal and / or intranatal periods of development (preeclampsia of the 1st and 2nd half of pregnancy, the threat of premature birth, ARI during pregnancy, exacerbation of chronic diseases, anemia in the mother, etc.) (respectively, in 80.2 and 44.2%; $p<0.05$). The pathological course of labor occurred in 79% of the 1st group and in 52% of the 2nd group ($p < 0.05$).

Conclusions: Thus, drawing conclusions from our studies, among medical and biological risk factors, maternal anemia during pregnancy is of the greatest importance in the development of the pathology of bronchopulmonary diseases. Physical development using the WHO AnthroPlus program (2009) among young children with a disease of the respiratory system, there was a growth deficit in children of 1 year of life - 3.8% and in 3 years of age 1.5%, a weight deficit of 3.8%, was observed in in patients of 1 year of life and in 2 years of age 1.5%, 3 years of age 0.7%, it should be noted that in children of 1 year of age 3.8% were overweight. In children of the first year of life, the incidence of pneumonia was 64.9%, and in 2 years 58.5%. Recurrent obstructive bronchitis was more common in children aged 3 years - 43.6%.

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