

FEATURES OF THE CURRENT COURSE OF ACUTE BRONCHIOLITIS IN CHILDREN UNDER 3 YEARS OLD

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Abstract. *To study the features of the modern course of acute bronchiolitis in children under 3 years of age; boys in the first year of life are more often affected than girls. Acute bronchiolitis in children often occurred against the background of concomitant pathology, and 42% of children had lymphocytosis against the background of a normal number of leukocytes.*

Keywords: *Children, bronchiolitis, respiratory failure, retraction, lower respiratory tract.*

Relevance. Respiratory diseases in children occupy first place in the structure of morbidity and third place in the structure of infant mortality [3]. They belong to the so-called “managed”, i.e. preventable causes of child mortality [2]. Reducing mortality from respiratory diseases is the most realistic reserve for reducing child mortality in general [4]. In this sense, acute diseases of the lower respiratory tract are of great interest, as they have a more severe, complicated course in the structure of acute respiratory pathology [4]. Acute bronchiolitis is a common disease of the lower respiratory tract and a common cause of hospitalization in young children [1, 2, 5]. Every year, 150 million cases of bronchiolitis are registered worldwide (11 cases per 100 infants), 7-13% of which require hospital treatment and 1-3% require hospitalization in an intensive care unit [3]. According to the literature, the cause of acute bronchiolitis is most often a viral infection, and respiratory syncytial virus is the most common pathogen (70-80% of cases) [1, 2, 5].

Other viruses (rhinoviruses, enteroviruses, influenza A and parainfluenza viruses, adenoviruses, coronaviruses) are detected less frequently [3, 4]. Almost all children suffer from RS virus infection in the first two years of life (90%), but only in approximately 20% of cases do they develop bronchiolitis, which may be due to the presence of predisposing factors [1, 2, 3].

Purpose of the study. to study the features of the modern course of acute bronchiolitis in children under 3 years of age.

Materials and methods of research. We examined 45 patients, including 27 boys and 18 girls, who at the time of the study were in the department of young children at the TashPMI clinic, diagnosed with Acute Bronchiolitis at the age of 3 months to 3 years of life. The average age is 6-12 months. Boys get sick more often [1, 3]. The seasonal peak incidence of bronchiolitis is observed from October to May [4]. The following research methods were used: clinical and anamnestic, functional and instrumental - ECG, echocardiography. Consultations of narrow specialists; ENT, neurologist, ophthalmologist. Survey – survey of parents.

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 using Student's tests. Differences in the compared values were considered statistically significant at $p < 0.05$.

Results and discussions. Indications for hospitalization of children with bronchiolitis were: apnea (89.3%), signs of respiratory failure of the 2nd-3rd degree (89.2%), wet cough -63%. Among patients with acute bronchiolitis, 63.5% were children from 6-12 months, 36.5% were from one year to 3 years. The allergy history was studied: 56.8% of children had allergic diseases

in relatives, 43.2% of children had no heredity. Acute bronchiolitis in children often occurred against the background of concomitant pathology. Atopic dermatitis was diagnosed in 47% of patients, malnutrition, protein-energy deficiency 2-3 SD - 12.%, overweight in 6.9% of children, aggravated premorbid background - rickets 35.3%, anemia 45.6%, irritable bowel syndrome 18.5%. The majority of children - 62.5% were breastfed, 11.9% of children were mixed-fed and 25.6% were bottle-fed. The main symptoms of intoxication were noted on the 2-5th day against the background of an acute upper respiratory tract infection. Complaints from the mother: lethargy, apathy, decreased appetite in children, increased body temperature up to 37.5°C were noted in 30% of cases, in 36% of children – 38.5°C, in 26% of cases – 38-39°C, in 8 % of children – above 39°C.

A non-productive rare cough was observed in 7% of children, a non-productive, frequent, paroxysmal cough - in 47%, an unproductive cough - in 46% of children. Visually, slight swelling of the chest was detected. Percussion detected a box-shaped sound in 75% of patients, and a clear pulmonary sound in 25%. Increasing dyspnea was accompanied by increased breathing in 78%. All children with acute bronchiolitis had increased exhalation, participation of auxiliary muscles in the act of breathing, retraction of the intercostal spaces during inspiration, flaring of the wings of the nose, 35 patients (78%) were diagnosed with respiratory failure of 2-3 degrees, and 10 (22.6%) children with respiratory failure of 1-2 degrees.

On auscultation, 42% of patients with acute bronchiolitis heard weakened breathing with moist, fine-bubble rales, and in 52%, harsh breathing, moist, fine-bubble rales, and crepitus. An X-ray of the chest organs in all children revealed increased transparency of the lungs with drooping domes of the diaphragm. In peripheral blood, anemia was observed in 51% of children. Leukopenia was detected in 17% of patients with a slight increase in ESR. 42% of children had lymphocytosis against the background of a normal number of leukocytes, 27% had monocytosis and a slight increase in ESR.

In 37.2% of children, leukocytosis was observed in the peripheral blood, in 29.6% - neutrophilia, a neutrophil shift to the left was detected in 22.4% of children, and in 25.6% - an increase in ESR. In the treatment of acute bronchiolitis, bronchodilators were used through a nebulizer 3-4 times a day: salbutamol at a dose of 0.15 ml/kg body weight, maximum 2.5 ml; fenoterol per dose 2 drops/kg body weight, maximum 10 drops (0.5 ml), oral hydration and inhalation with soda solution. Children with severe inflammatory changes in the blood were treated with antibiotics.

Conclusions. Thus, boys in their first year of life are more likely to suffer from acute bronchiolitis than girls. Acute bronchiolitis in children often occurred against the background of concomitant pathology. 42% of children had lymphocytosis against the background of a normal number of leukocytes.

REFERENCES

1. Баранов, А. А. Острый бронхиолит у детей. Современные подходы к диагностике и терапии / А. А. Баранов [и др.] // Педиатрическая фармакология. – 2015. – Т. 12, № 4. – С. 441-446.
2. Воробьева, А.В. Об этиопатогенезе острого бронхиолита у детей (обзор литературы) // Вестник новых медицинских технологий. – 2017. – Т. 11, № 4. – С. 268-273.

3. Патрушева, Ю.С. Лечение острого бронхолита у детей / Ю.С. Патрушева // Фарматека. – 2012. – Т. 248, № 15. – С. 56-62.
4. Спичак, Т.В. Вирусные бронхолиты и их последствия в детском возрасте / Т.В. Спичак // Педиатрия. – 2013. – Т. 92, № 3. – С. 90-91.
5. Ralston, S. L. The Diagnosis, Management, and Prevention of Bronchiolitis: Clinical Practice Guideline / S. L. Ralston [et al] // Pediatrics. American Academy of Pediatrics. – 2014. – Vol. 134, № 5. – P. 1474-1502.