



Characteristics And Effects Of Acute Bronchiolitis In Infectious Children (Citomegalovirus)

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ABSTRACT

The article is dedicated to the problem of acute bronchitis in children. The relevance of this problem is obvious: according to conservative estimates, more than 150 million cases of bronchiolitis are registered annually. 7-13% of these cases require hospital treatment and 1-3%-hospitalization in an ICU. The most common etiologic factor is the virus-respiratory syncytial (the vast majority of cases-60-80%) cytomegalovirus, influenza viruses, parainfluenza, adenovirus, coronavirus are also important agents. A number of factors can cause the evolution of bronchiolitis in 0-2 years-old children. Premature infants, children with bronchopulmonary dysplasia, bottle-fed children, and patients with congenital malformations and immunodeficiencies undergo bronchiolitis especially hard.

Keywords:

cytomegalovirus, influenza, cytomegalovirus, parainfluenza, rhinovirus, radiograph, acute bronchiolitis.

Relevance. Acute bronchiolitis is a generalized obstructive inflammatory disease of the small bronchi and bronchioles, mainly in children under two years of age. More than 150 million acute bronchiolitis diagnoses are recorded worldwide every year. 7-13% of patients are hospitalized and 1-3% require intensive care [2]. According to American pediatricians, the incidence is 3-4 cases per 100 children per year under the age of two years and 1-2 cases per 100 children per preschooler [3]. Acute bronchiolitis is a disease of viral etiology, in 60-80% of cases the disease is caused by respiratory syncytial virus [8]. In other cases, it causes cytomegalovirus, parainfluenza, influenza, rhinoviruses. The disease most often occurs in children with allergic, exudative catarrhal, lymphohypoplastic diathesis, paratrophic, artificial feeding. This is mainly a severe form

in children with premature birth, bronchopulmonary dysplasia, artificial feeding and congenital malformations, immunodeficiency. Symptoms of the disease include obstruction of the lower respiratory tract caused by SARS (difficulty breathing, tachypnea, stridor, respiratory muscle damage, nasal congestion, apnea), cough, signs of intoxication [7].

Premature babies are more likely to develop sleep apnea. During auscultation, a large number of quiet, finely bubbling rales on inspiration and dry rales on expiration are heard. Whistling does not change its position when coughing. Rare wheezing, and sometimes wheezing with shallow breathing, is practically inaudible. In the first hours of the disease, the body temperature is high. The severity of the patient's general condition is determined by the symptoms of intoxication and respiratory

failure [6]. General blood tests sometimes show leukopenia, increased ESR. The shift of the leukocyte formula is not observed.

The radiograph shows an increase in the clarity of the lung area, mainly in the peripheral areas, a decrease in the clarity of the lung area in small areas, the location of the diaphragm from below, the horizontal position of the ribs. After the first 2-3 days of the course of the disease, the patient may die from bouts of shortness of breath, coughing, especially apnea. The course and outcome of the disease differ depending on the etiological factor. Acute bronchiolitis caused by respiratory syncytial virus is milder than others (influenza, cytomegalovirus, parainfluenza, rhinovirus), and complications are less developed [4].

Purpose of the study: to study the specifics of the course and consequences of acute bronchiolitis caused by cytomegalovirus infection in children under one year of age.

Object of study: 156 sick children under the age of one year were hospitalized with a diagnosis of "acute bronchiolitis (J21.9)" in the pathoanatomical department of the children's multidisciplinary polyclinic in Andijan from 11.09.2017 to 12.11.2018.

Research methods:

1. Clinical examination of patients.
2. General clinical and laboratory methods (general blood count, urinalysis, biochemical blood test).
3. Chest radiograph.
4. Immunological research method: determination of antibodies to CMV IgM in the patient's blood.

Results and discussion. In twenty pediatric patients tested, titers of IgM to cytomegalovirus are above normal ($0.31 <$) and IgG ($0.21 >$) are negative in the blood according to immunological testing.), and in 22 of them showed a high standard ($0.21 \geq; \geq 0.31$). In 62 patients, immunoglobulin was not detected.

Of these children admitted to the intensive care unit, 5 had abnormal levels of IgG to cytomegalovirus ($0.22 <$), and one had higher than normal IgM titers to cytomegalovirus ($0.22 <$). The rest of the patients of the department underwent the following conservative treatment measures.

Therapeutic measures are mainly aimed at eliminating respiratory failure.

A short-acting nasal aspirator was used to secure the upper airway. Since the clearness of the upper airways leads to an easy feeling of the child and activation of breastfeeding, the positive or negative effect of this treatment on the course and outcome of acute bronchiolitis has not been proven [9]. Antibiotic therapy was used when the duration of the disease was more than 5–7 days, with suspicion of severe leukocytosis, an increase in ESR, and the development of pneumonia.

Antiviral drugs were used mainly in the form of aerosols and suppositories. Currently, the effect of antiviral drugs on the course of the disease has not been sufficiently proven [1].

Depending on the patient's condition, dehydration measures were administered orally, through a nasogastric tube, or parenterally.

Intravenous infusions did not exceed 20 ml/kg per day, since they increased the likelihood of inadequate production of antidiuretic hormone, which, in turn, led to the development of lung tumors [5]. Humidified oxygen was supplied at less than 94% oxygen saturation. In the form of aerosols, bronchodilators, mucolytics and expectorants were used.

Steroids of local and general action in aerosol form were not used, since their effect on the progression of the disease has not been proven [10]. Treatment was carried out in the same way in patients with IgM and IgG antibodies to cytomegalovirus and in patients in the control group.

Clinical signs of respiratory failure, intoxication, and hypoxemia were strongly manifested. The clinical and laboratory period of recovery of these patients was increased by 3-5 days compared with patients in the control group. Cough syndrome persisted for a long time in children with elevated levels of IgG antibodies to cytomegalovirus. Three patients had complicated nosocomial bleeding. Chest x-ray showed diffuse enhancement of the lung image, emphysematous swelling of the lung area, sliding of the diaphragm, and marked

manifestation of signs of stagnation in the small circulatory system.

Conclusion. The results of the study show that acute bronchiolitis of cytomegalovirus etiology and lesions is more severe than bronchiolitis of other viral etiology, and has a high degree of complications.

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