CLINICAL AND LABORATORY PECULIARITIES OF VIRAL LOWER RESPIRATORY TRACT INFECTIONS IN EARLY CHILDGOOD

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Relevance: according to the WHO, lower respiratory tract infections (LRTIs) are the second most common cause of mortality in children [1]. Up to 65% of LRTIs are caused by viruses or both viruses and bacteria. Viral LRTIs represent topical problem in practical health care due to the complexity of their diagnosis and the high risk of unfavorable outcomes [2, 3].

Objective: to study the etiological structure, clinical and laboratory features of viral LRTIs in infants.

Materials and methods: case histories of 150 patients aged 1 month to 3 years with diagnoses of acute bronchitis, acute bronchiolitis, community-acquired pneumonia. All children underwent physical examination, chest x-ray, bacteriological cultures from the pharynx and nose, complete blood count, examination of nasopharyngeal swabs for respiratory viruses (respiratory syncytial viruses (RSV), influenza A, B, parainfluenza types 1-4, human coronaviruses, metapneumovirus, rhinovirus, adenoviruses of groups B, C, E, bocaviruses) by PCR. Statistical analysis using Student's t-test to assess the reliability of research results was also carried out.

Results: the cause of the disease was established in 60% of cases, among them RSV was found in 39.3%, metapneumovirus in 22%, bocavirus in 15.3% of children; parainfluenza virus (10.7%), adenovirus (7.3%), rhinovirus (5.4%) were less frequently detected. The majority of patients (78%) had an acute onset of the disease. Clinically, 96.6% of children had catarrhal symptoms (cough, coryza); 80% and 6.8% of children had febrile and subfebrile fever, respectively; intoxication syndrome (weakness, lethargy) was observed in 92% of patients. Gastrointestinal symptoms (vomiting, profuse regurgitation, watery diarrhea) were found in 25.3% of children. 32% of children had acute respiratory failure of 1–2 degree, which was significantly more common in infants and patients with chronic diseases. Among the nosological forms, acute bronchiolitis (54%), acute bronchitis (18%), acute obstructive bronchitis (10%), community-acquired pneumonia (18%) prevailed. A total of 77% of patients were considered to have mild and moderate disease, and 23% were considered to have severe disease. Complete blood count revealed nonspecific inflammatory changes more often (leukopenia in 35.5%, leukocytosis in 54.7%, accelerated ESR in 53.9% of children). 84% of children had concomitant chronic diseases, of which food allergens sensitization (47.6%), chronic bronchopulmonary diseases (19%), prematurity (12%) came out on top.

Conclusion: in young children, lower respiratory tract infections are more often caused by viruses, of which RSV and metapneumovirus are the most common. A more severe and complicated course of LRTI was found in young children. The non-specificity of the patient's complaints and changes in the complete blood count was noted. These features result in complexity in the diagnosis of respiratory diseases in children.

References

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