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ISSN 3030-3168 | Vol 1 | Iss 6 | 2026

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CLINICAL AND LABORATORY FEATURES OF PNEUMONIA IN YOUNG CHILDREN

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ABSTRACT

Relevance. Pneumonia in young children remains one of the most urgent problems of modern pediatrics due to its high prevalence, risk of severe complications, and significant contribution to childhood morbidity and hospitalization rates. Anatomical and physiological characteristics of the respiratory system in early childhood, including narrow airways, insufficient development of lung tissue, and immature immune defense mechanisms, contribute to the rapid progression of the inflammatory process and the development of respiratory failure. Early identification of clinical and laboratory manifestations of pneumonia is essential for timely diagnosis, assessment of disease severity, and selection of appropriate therapeutic strategies. Purpose of the Study. The aim of this study was to investigate the clinical and laboratory features of pneumonia in young children in order to improve the effectiveness of early diagnosis and treatment of the disease. Materials and Methods. The study analyzed clinical and laboratory data of young children who received inpatient treatment with a diagnosis of pneumonia. Complaints, medical history, physical examination findings, complete blood count parameters, C-reactive protein levels, chest radiography results, and oxygen saturation indicators were evaluated. Particular attention was paid to the severity of intoxication syndrome and respiratory failure. Results. The majority of children had an acute onset of the disease characterized by fever, cough, general weakness, and decreased appetite. Some patients demonstrated signs of respiratory insufficiency, including tachypnea, chest wall retractions, and decreased oxygen saturation. Auscultation revealed weakened breathing, fine moist crackles, and crepitation in the lungs. Laboratory investigations most commonly showed leukocytosis, neutrophilia, elevated erythrocyte sedimentation rate (ESR), and increased C-reactive protein levels, indicating the presence of an active inflammatory process. Radiological examination confirmed focal or segmental infiltrative changes in the pulmonary tissue. Children with more severe clinical manifestations demonstrated more pronounced laboratory inflammatory markers and lower oxygen saturation levels. The presence of intoxication syndrome and respiratory disturbances significantly affected the severity and duration of the disease. Conclusion. Pneumonia in young children is characterized by pronounced clinical symptoms of intoxication and respiratory disorders accompanied by significant inflammatory laboratory changes. Comprehensive assessment of clinical, laboratory, and instrumental findings plays an important role in the early diagnosis of pneumonia, timely initiation of therapy, and prevention of complications. Careful monitoring of respiratory status and inflammatory markers is essential for improving treatment outcomes in pediatric patients with pneumonia.

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MATERIALS AND METHODS

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RESULTS

The majority of children had an acute onset of the disease characterized by fever, cough, general weakness, and decreased appetite. Some patients demonstrated signs of respiratory insufficiency, including tachypnea, chest wall retractions, and decreased oxygen saturation. Auscultation revealed weakened breathing, fine moist crackles, and crepitation in the lungs. Laboratory investigations most commonly showed leukocytosis, neutrophilia, elevated erythrocyte sedimentation rate (ESR), and increased C-reactive protein levels, indicating the presence of an active inflammatory process. Radiological examination confirmed focal or segmental infiltrative changes in the pulmonary tissue. Children with more severe clinical manifestations demonstrated more pronounced laboratory inflammatory markers and lower oxygen saturation levels.

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CONCLUSION

Pneumonia in young children is characterized by pronounced clinical symptoms of intoxication and respiratory disorders accompanied by significant inflammatory laboratory changes. Comprehensive assessment of clinical, laboratory, and instrumental findings plays an important role in the early diagnosis of pneumonia, timely initiation of therapy, and prevention of complications. Careful monitoring of respiratory status and inflammatory markers is essential for improving treatment outcomes in pediatric patients with pneumonia.