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Improvement of Methods of Treating Atypical Pneumonia of Mycoplasmal Etiology in Children

Ibragimova Marina Fyodorovna
Associate Professor of the Department of Pediatrics №1 and Neonatology

Esanova Munira Ravshanovna
2nd year master's resident of the Department of Pediatrics № 1 and Neonatology, Samarkand State Medical University

Khamraeva Yulduz Makhmudovna
Head of the Department of the Second Clinical Sciences Methodological Association of the Kattakurgon Abu Ali Ibn Sino Public Health College, Samarkand, Uzbekistan

Abstract: Pneumonia, or inflammation of the lungs, is dangerous not only for children but also for adults. This is primarily due to the risk of serious complications, pulmonary edema, including lung abscess, pleurisy, pleural empyema, obstruction, endocarditis, acute respiratory failure, pericarditis, sepsis. One of the most common diseases in children is pneumonia, which occupies a worthy place in terms of morbidity and mortality. We treated 48 patients aged 3 to 14 years, who were divided into 2 groups. 24 patients were prescribed complex therapy, which included antibacterial drugs and antiviral drugs in age-appropriate doses for 10 days. The clinical manifestations of group I improved almost 2 times faster than in patients in group II. For accurate verification of the pathogen, laboratory methods of diagnosing atypical pneumonia are used: bacteriological culture of sputum, nasopharyngeal swabs on nutrient media; ELISA, RSC, radioimmunoassay, RIF, PCR. Timely and adequate etiotropic therapy promotes rapid regression of clinical manifestations of atypical mycoplasma pneumonia. Meanwhile, radiographic changes can persist for a long time, up to 4-6 weeks. In the therapy of atypical pneumonia caused by mycoplasma, macrolides (azithromycin, erythromycin), lincosamines (clindamycin) are used in the main course of at least 7 days and an additional one - 2 days after the symptoms subside. At the same time, symptomatic (antipyretic, mucolytic, bronchodilator) therapy is carried out, glucocorticosteroids are prescribed for bronchiolitis. Complex treatment of antibiotics and antiviral drugs for atypical pneumonia showed that they are most effective in reducing the severity of the disease. Thus, the combined use of antibacterial and antiviral drugs in the treatment of atypical pneumonia in children is effective. Ease of use, the availability of a drinkable form of the drug, high efficacy and the absence of significant side effects allow us to recommend this treatment for widespread use in pediatrics. Based on the above, the combined use of antibacterial and antiviral drugs for the treatment of patients with inflammatory diseases of the upper and lower respiratory tract may be recommended.

Keywords: treatment, atypical mycoplasmal pneumonia, children, complex treatment.

Relevance. Atypical pneumonia is an infectious and inflammatory lung disease caused by uncharacteristic (atypical) pathogens - chlamydia, mycoplasma, legionella, viruses. Since the late

30s, the term "atypical pneumonia" has been used in clinical medicine to refer to interstitial pneumonias caused by atypical pathogens that have specific clinical course, diagnostics, and treatment features. Unlike "typical" pneumonias caused by bacterial coccal flora, cases of atypical inflammation can be caused by mycoplasmas, chlamydia, coxiella, klebsiella, salmonella, and viruses.Atypical pneumonia is accompanied by symptoms of general malaise, high fever, chills, sweating, muscle and headache, cough, shortness of breath. In severe cases, pulmonary heart failure may develop and the patient may die. Diagnosis of atypical pneumonia requires taking into account epidemiological anamnesis data, identification of the pathogen (by ELISA, RIF, PCR, culture sowing, etc.), and chest X-ray. Taking into account the etiology, treatment of atypical pneumonia is carried out with antimicrobial (macrolides, fluoroquinolones, tertracyclines) and antiviral chemotherapy drugs. The main difficulty with therapy is that effective drugs have not yet been found against some of the viral pathogens that cause atypical pneumonia. [9,13,15]. Respiratory diseases occupy a leading place in the structure of infectious pathology of children, and the highest incidence of community-acquired pneumonia of atypical etiology is observed among children. Atypical pneumonias account for approximately 15-30% of cases of pneumonia in children and adolescents, and focal epidemic outbreaks are possible in children's groups. [1,2,4,12,16]. Community-acquired pneumonia is an inflammatory disease of the lung tissue, developing in a community setting, accompanied by signs of inflammation of the respiratory tract (fever, wet productive cough, sputum production, chest pain, mixed shortness of breath) and radiological signs. Antibacterial and antiviral therapy is the basis of etiotropic treatment of atypical pneumonia. For effective therapy, it is ideal to prescribe an antimicrobial drug that is most active against the identified pathogen [3,5,10,13]. The problem of rational antibacterial therapy is one of the most urgent problems in pediatrics. The course and outcome of community-acquired pneumonia depend on the correct choice of antibacterial drug at the onset of the disease. [6,7,11,15]. In pediatric practice, preference is given to oral administration of antibiotics. New extended-release forms of antibiotics reduce the frequency of their use, have a wide spectrum of action and low toxicity, which allows their widespread use in pediatrics.

Objective: To study the effectiveness of combined use of antibacterial and antiviral drugs for atypical pneumonia in children.

Materials and methods of the study. Depending on the prescribed therapy, 48 patients aged 3 to 14 years were divided into 2 groups and were treated inpatiently at the regional multidisciplinary children's center. Atypical pneumonia of mycoplasmal etiology is characterized by a discrepancy between physical data and radiographic signs, and the absence of an effect from antibacterial therapy with penicillins or cephalosporins. Auscultatory changes appear on the 3rd-5th day and are characterized by weakened breathing, a minimal amount of moist rales. Percussion changes over the lungs are weakly expressed. Atypical pneumonia can be diagnosed only by chest radiography in 2 projections: this reveals weak or moderate-intensity heterogeneous infiltration of the lung tissue ("blurred" shadows), a sharp change in the bronchial and vascular pattern with the appearance of diffuse loop-shaped and mesh elements. For accurate verification of the pathogen, laboratory methods of diagnosing atypical pneumonia are used: bacteriological culture of sputum, nasopharyngeal swabs on nutrient media; ELISA, RSC, radioimmunoassay, RIF, PCR. The main group included 24 children who received complex therapy for pneumonia with the appointment of antibacterial and antiviral drugs in age-appropriate doses. Combined treatment was carried out for 7 days.

Results of the study: Timely and adequate etiotropic therapy promotes rapid regression of clinical manifestations of atypical mycoplasma pneumonia. Meanwhile, radiographic changes can persist for a long time, up to 4-6 weeks. In the therapy of atypical pneumonia caused by mycoplasma, macrolides (azithromycin, erythromycin), lincosamines (clindamycin) are used in the main course of at least 7 days and an additional one - 2 days after the symptoms subside. At the same time, symptomatic (antipyretic, mucolytic, bronchodilator) therapy is carried out, glucocorticosteroids are prescribed for bronchiolitis. Pneumonia developed in 40% of patients on the 3rd day from the onset of URI symptoms. Atypical mycoplasma pneumonia accounts for

about 10-20% of all cases of pneumonia in children and adolescents and 2-3% of cases in adults. In children's groups, focal epidemic outbreaks of mycoplasma pneumonia are possible. Clinically, respiratory mycoplasmosis can occur in the form of nasopharyngitis, tracheitis, bronchitis, and atypical pneumonia. The course of mycoplasma pneumonia is usually mild or moderate. After the incubation period (3-11 days), a short prodromal period (1-2 days) occurs, during which dryness of the mucous membranes of the upper respiratory tract, sore throat, dry cough, headache, and slight malaise are of concern. The clinic of atypical mycoplasma pneumonia itself is characterized by subfebrile temperature not rising above 38 ° C; paroxysmal unproductive cough, which bothers about 2-3 weeks. In 20-30% of cases, mycoplasma pneumonia is bilateral. The results of pre-treatment studies showed that 19 patients in group 1 and 17 in group 2 had hyperthermia and signs of intoxication. Cough was observed in 20 and 21 patients in groups 1 and 2. Shortness of breath was observed in 6 and 8 patients. On the 4th day after the start of treatment, 20 children in group 1 and 16 in group 2 showed positive clinical dynamics of the disease: signs of intoxication decreased, body temperature decreased**.** By the 5th day of treatment, cough, shortness of breath, and wheezing disappeared in 22 children in group 1 and 19 in group 2. During the comparative analysis, physical changes in the lungs did not show significant differences; they normalized on average 0.3 days faster in patients receiving group I compared to standard therapy. As a result, the use of drugs significantly reduced the duration of hospitalization, so patients in group I spent an average of 1.1 days less in the clinic than patients in group II. As can be seen from the results of the examination and treatment of atypical pneumonia in children, combined treatment with antibacterial and antiviral drugs was accompanied by rapid positive dynamics; Signs of intoxication stopped on day 3, cough and shortness of breath stopped on average on day 5, percussion changes in the lungs normalized on day 6, X-ray dynamics on day 10. The children tolerated the combination treatment well, no adverse reactions were noted.

Conclusion. Thus, the combined use of antibacterial and antiviral drugs in the treatment of atypical pneumonia in children is effective. Ease of use, the availability of a drinkable form of the drug, high efficacy and the absence of significant side effects allow us to recommend this treatment for widespread use in pediatrics. Based on the above, the combined use of antibacterial and antiviral drugs can be recommended for the treatment of patients with inflammatory diseases of the upper and lower respiratory tract.

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