OPTIMIZATION OF DIAGNOSIS OF COMMUNITY ACQUISITED PNEUMONIA IN CHILDREN AT THE PREHOSPITAL STAGE

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Annotation: *The current features of the course of CAP in children in a children's hospital were studied, the main risk points for the occurrence of this disease and its complications in children depending on age were identified and assessed, as well as possible directions for its prevention. In order to improve diagnosis and treatment, we studied the quality of medical care for hospitalized children with pneumonia.*

Key words: *children, community-acquired pneumonia, risk factors, course, treatment*

ОПТИМИЗАЦИЯ ДИАГНОСТИКИ ВНЕБОЛЬНИЧНОЙ ПНЕВМОНИИ У ДЕТЕЙ НА ДОГОСПИТАЛЬНОМ ЭТАПЕ

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Аннотация: *Изучены современные особенности течения ВП у детей в детской больнице, выявлены и оценены основные точки риска появления этого заболевания и его осложнений у детей в зависимости от возраста, а также возможные направления его профилактики. С целью улучшения диагностики и лечения мы изучили качество медицинской помощи госпитализированным детям с пневмонией.*

Ключевые слова: *дети, внебольничная пневмония, факторы риска, течение, лечение*

BOLALAR ZOTILJAMINI SHIFOXONAGA QADAR TASHXISLASHNI OPTIMALLASHTIRISH

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Izoh: *Biz bolalarda zotiljamning shifoxonadan tashqari SHTZ turining hozirgi xususiyatlarini o‘rganib chiqdik, ushbu kasallikning paydo bo‘lish xavfining asosiy nuqtalarini va yoshga qarab bolalarda uning asoratlari va uning oldini olishning mumkin bo‘lgan yo‘nalishlarini aniqladik va baholadik. Diagnostika va davolashni*

yaxshilash maqsadida, kasalxonaga yotqizilguncha bo‘lgan davrda, zotiljamni tashxislash va tibbiy yordam ko‘rsatish sifatini o‘rgandik

Kalit so'zlar: *bolalar, jamiyat tomonidan orttirilgan pnevmoniya, xavf omillari, kurs, davolash*

Community-acquired pneumonia (CAP), known since ancient times, is a pressing respiratory problem in childhood to this day. There remains a steady increase in morbidity and child mortality from this pathology throughout the world [1,2,8].

For “X-ray positive” pneumonia, according to hospitalization data in economically developed countries, the incidence is 1.5–3 per 1,000 children 0–15 years old and 3.4–6.8 in children 0–5 years old [4, 9].

According to WHO, the share of pneumonia among the causes of mortality in children under 5 years of age in the world is 15%. In Russia, according to Rospotrebnadzor, the incidence of CAP among children under 14 years of age is approximately 2 times higher than the incidence for the general population [5,7,10]. The incidence of CAP among children and adolescents in Uzbekistan is estimated at 7.95–8.86% with a maximum prevalence of 2–4 years and 15–18 years [1,2,3]. According to research materials, about 15–20 per 1,000 children in the first three years of life and approximately 5–6 per 1,000 children over 3 years of age are affected annually; the incidence varies in individual regions of the country - from 2.3 to 24.3% [3] . The statistics of our hospital reflect an increase in hospitalizations of children with CAP, so, according to the infectious diseases department of the Municipal Healthcare Institution No. 5 in Andijan, the share of patients in the morbidity structure in 2021 increased by 33.7%, and in 2022 by another 37.0 %[2,3,6]. Our statistics for 2021-22 is not reliable, since during this special period, marked by the emergence of a pandemic of a new coronavirus infection, the routing of sick children with CAP involved their hospitalization in specialized hospitals for the treatment of COVID-19 [7,10].

Goal of the work. To analyze the current features of the course of CAP in children in a children's hospital, depending on age, premorbid background and pre-hospital management tactics for these patients to determine the main risk factors for the occurrence of CAP and its complications, as well as to optimize treatment and prevention.

Research methodology. A cohort study of case histories of 125 children with CAP who were treated in the pulmonology department of the Children's Medical Center in Andijan during 2021 was conducted.

When conducting the analysis, we did not take into account those few patients with CAP who were treated in 2021 and the first half of 2022, since from the beginning of 2022 it is possible to assume, with a high degree of probability and due to possible errors in the results of laboratory examination, a special etiology of pneumonia caused

by a new coronavirus infection, which determines the characteristics of the course, diagnosis and treatment.

Inclusion criteria: age 3 months – 14 years, in all patients the diagnosis of CAP was confirmed by a complex of clinical and laboratory studies in accordance with clinical recommendations (CR), verified by radiology. Informed voluntary consent of parents/legal representatives for children's participation in the study was obtained.

Research results and discussion. During the study, patients were divided by age into 3 groups: the 1st group consisted of young children aged 3 months to 3 years - 67 children, the 2nd group - preschoolers aged 3-7 years (104 children), the 3rd group - schoolchildren from 7 to 14 years old (124 children).

We analyzed the features of the course of CAP in children in the hospital and the premorbid background of patients depending on their age, as well as the examination and treatment of these patients on an outpatient basis in terms of compliance with the CR. Boys predominated in all groups (64.2, 54.8 and 68.0%, respectively). Results of the analysis of the premorbid background of patients, indicating the most significant factors in different age groups.

Among all the premorbid background factors that we analyzed, the table presents those that were identified with the highest frequency in children in different age groups.

If in young patients, prematurity and low birth weight, transfer to artificial and mixed feeding before 6 months of life, and the presence of a burdened allergic history are of particular importance, then in children over 3 years of age, in addition to the above, such factors include frequent respiratory infections, existing persistent respiratory tract infections (herpes, mycoplasma) and chronic foci of infection. Without a doubt, the results of our analysis once again prove the need for organizing a healthy lifestyle for a child, starting from birth, and an individual approach to each child with a respiratory infection.

Analysis of the prehospital stage of patient management showed that the respiratory infection began acutely, the duration of this stage in group 1 was 3–4 days from the moment of seeking help, in groups 2 and 3 from 3 to 6–8 days.

Indications for hospitalization of sick children were often clinical signs of intoxication (decreased appetite, refusal to eat and drink, disturbances in the child’s behavior), increased body temperature for 2–3 days or more with a short-term effect or no effect from antipyretics, as well as the presence of shortness of breath , in rare cases - the result of an x-ray examination. The complex of treatment carried out at the outpatient stage for patients of the 1st group included only symptomatic therapy, and in the 2nd and 3rd groups the vast majority of patients also received antibacterial therapy in the period from 1 to 5 days at the time of hospitalization (90.4 and 92.7% respectively).

Diagnosis, treatment and prevention of CAP in children in the Republic of Uzbekistan are carried out on the basis of the CR. Our study revealed defects in patient

management at the prehospital stage. Thus, pediatricians at clinics quite often ignored the recommendation to begin antibacterial treatment with amoxicillin as the drug of choice, according to the Kyrgyz Republic.

Our analysis revealed the prescription of this drug in only 41.3% of patients in group 2 and 16.9% in group 3. In most cases, macrolides or oral cephalosporin antibiotics were prescribed. At the same time, evidence has been revealed of early prescription of antibiotics, sometimes in low doses, without taking into account recommendations, which contributes to the development of antibiotic resistance.

In some cases, the prescription of amoxicillin was ineffective, probably due to the development of atypical pneumonia (mycoplasma, etc.), which required an additional differential diagnosis taking into account age, clinical manifestations, assessment of laboratory and radiological data.

At the same time, the analysis showed that additional laboratory and x-ray examinations were prescribed by doctors in children's clinics quite rarely.

At the hospital stage, all patients received complex therapy according to the CR, against the background of which fever in children usually did not exceed 2–3 days, but in 6.5% of young children, 18.3% of preschool children and 13.7% of schoolchildren it persisted for up to 4–6 days, which required adjustment of antibacterial and detoxification therapy. In some cases, in patients with pleurisy (in group 2 - 3.9%, in group 3 - 10.5%), body temperature remained elevated to subfebrile levels with periodic rises to febrile values during the first 8–12 days. The timing of radiological resolution of CAP, duration and volume of antibacterial therapy depended on the clinical and morphological form of pneumonia, concomitant intrapulmonary complications and were longer in children over 3 years of age. Courses of antibiotic therapy for more than 10 days, combinations of antibiotics, sometimes with the prescription of repeated courses, were indicated for school-age patients more often - in 19.3% of cases versus 5.9% in the group of young children and in 14.7% of cases in the group of preschoolers. This increased the length of hospitalization, which is associated with the risk of re-infection of patients in the hospital.

Conclusion. Our study showed the need to take into account premorbid background data in children with acute respiratory diseases when assessing the severity of the condition in order to early detect CAP and its complications, as well as timely diagnosis of chronic bronchopulmonary pathology. In order to prevent CAP and its complications, the principles of organizing child care, rational nutrition and infection prevention are still relevant.

Improving the quality of diagnosis of CAP at the prehospital stage is possible only with an individual approach to any acutely ill child, the results of his observation in order to identify indications for timely laboratory and x-ray examination, and the rational prescription of treatment, especially antibacterial therapy, taking into account the principles of evidence-based medicine, improves the prognosis of the course. diseases, reduces the length of hospitalization, and also helps limit the growth of

resistance of microbial flora. The course and severity of CAP in children, the occurrence of complications, and therefore the volume of necessary examination and treatment to achieve a favorable outcome of the disease, depend both on the age of the children, the characteristics of their premorbid background, the presence of concomitant pathology, and on the quality of care provided to these patients at each stage treatment.

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