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БУКОВИНСЬКИЙ ДЕРЖАВНИЙ МЕДИЧНИЙ УНІВЕРСИТЕТ»

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105-ї підсумкової науково-практичної конференції
з міжнародною участю
професорсько-викладацького персоналу
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Матеріали підсумкової 105-ї науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) – Чернівці: Медуніверситет, 2024. – 477 с. іл.

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У збірнику представлені матеріали 105-ї підсумкової науково-практичної конференції з міжнародною участю професорсько-викладацького персоналу Буковинського державного медичного університету, присвяченої 80-річчю БДМУ (м. Чернівці, 05, 07, 12 лютого 2024 р.) із стилістикою та орфографією у авторській редакції. Публікації присвячені актуальним проблемам фундаментальної, теоретичної та клінічної медицини.

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ASSESSMENT OF THE CLINICAL EFFICACY OF NEONATAL SEPSIS THERAPY DEPENDING ON THE LEVEL OF C-REACTIVE PROTEIN IN BLOOD SERUM

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Introduction. Neonatal sepsis is a major cause of morbidity and mortality. It is the third leading cause of neonatal mortality and constitutes 13% of overall, global neonatal mortality. The aim of treatment of neonatal sepsis is eradicating the infectious cause of the disease and correcting the multisystem dysfunction by supporting breathing, circulation, removing metabolic disorders and thermoregulation problems. Clinical and scientific studies show that early initiation of antibacterial therapy in newborns with suspected sepsis reduces mortality. According to international guidelines empiric antibiotic therapy should be initiated within an hour of the decision to start treating neonatal sepsis.

The aim of the study. To assess the clinical effectiveness of treatment of neonatal sepsis depending on the level of C-reactive protein in blood serum to improve patients' management tactics.

Material and methods. On the base of neonatal departments of the Chernivtsi Regional Children Clinical Hospital 56 newborns with neonatal sepsis were examined. Depending on the level of C-reactive protein (CRP) in blood serum two clinical groups were formed. The first (I) group included 25 patients with neonatal sepsis and the level of CRP in blood serum < 20 mg/l, the second (II) clinical group consisted of 31 newborn with sepsis and the level of CRP in blood serum higher 20 mg/l. The average concentration of CRP in the I and II groups was 8,8±0,4 mg/l versus 29,7±1,9 mg/l, $p<0,05$. There were no significant differences in gestational age, sex, place of parent's residence in the clinical groups. The impact of risk factors was assessed by attributable risk (AR), relative risk (RR), odds ratio (OR) and their 95% confidence intervals (CI). The treatment efficacy was evaluated by attributable risk reduction (ARR), relative risk reduction (RRR), number needed to treat (NNT).

Results. An average duration of neonatal sepsis treatment was 43,1±3,8 versus 41.4±3.4 days in patients of the I and II clinical groups, $P>0,05$. The newborns with the level of CRP in blood serum higher 20 mg/l were found to have a higher chance of being discharged from the hospital within 30 days of comprehensive sepsis therapy compared to patients of the first clinical group. ARR of hospitalization for more than 20 and 30 days in newborns of II clinical group compared to patients with a CRP level below 20 mg/l was 15,4% and 4,3%, RRR was 79,3% and 13,2% with NNT 1,3 and 7,6 respectively. Initial antibacterial therapy in the form of combination of aminopenicillins and aminoglycosides in 25,0±9,7% newborns of the first group and in 11,5±6,3% patients of the second clinical group required two more changes of antibacterial drugs. Thus, AR to receive three courses of etiotropic therapy of neonatal sepsis in children of the I clinical group compared to patients with a level of CRP above 20 mg/l was 13.5%, RR– 53,8 (95% CI 43,6-63,9%) and OR – 1,9 (95% CI 0,1-7,1%).

Conclusions. Empirical treatment of neonatal sepsis in patients with a relatively higher content of C-reactive protein in the blood serum is more effective and allows to reduce a relative risk of long-term hospitalization (more than 20 days) by 79,3% with minimal number required to treat 1,3. Newborns with level of C-reactive protein < 20 mg/l had significant higher chances to receive three different course of antibacterial drugs to eradicate causative agents of sepsis.

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SPECIFIC CLINICAL AND ANAMNESTIC FEATURES OF THE COURSE OF COMMUNITY-ACQUIRED PNEUMONIA IN CHILDREN CAUSED BY SARS-CoV-2

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Introduction. Pneumonia in children was and remains one of the frequent nosological forms of inflammation of the respiratory system, which was a significant factor in hospitalization and

serves as a leading factor in mortality in pediatric practice. This problem became especially acute with the beginning of the new coronavirus pandemic caused by the RNA virus SARS-CoV-2. Therefore, the search for recognition of clinical manifestations and verification of the etiological factor of inflammation of the pulmonary parenchyma serves as a predictor in preventing the development of possible complications.

The aim of the study. To investigate the specific clinical course of community-acquired pneumonia (CAP) in children with different etiological factors of the disease.

Material and Methods. A case control study with simple random sampling was carried out at Chernivtsi Regional Children Clinical Hospital, Ukraine. The study involved 123 children with community-acquired pneumonia. 84 children were tested positive for SARS-CoV-2 by the reaction of reverse transcription-polymerase chain reaction (RT-PCR) from nasopharyngeal swabs or exhaled breath condensate based on positive results and the absence of positive results in bacteriological studies (Group I, average age 11,1±0,47 years, 58,3% boys, 41,7% rural residents). In 39 patients bacterial pneumonia was verified due to negative virological findings and the presence of bacterial pathogens (staphylococci, streptococci, etc.) in throat swabs or sputum examinations (Group II, average age 9,6±0,81 years, 44,7% boys, 28,9% rural residents, $p>0,05$ in all cases). Examination and treatment were conducted according to current national standards and protocols. Etiology verification studies were conducted in regional certified laboratories, while the rest of the laboratory and instrumental examinations were carried out at Chernivtsi Regional Children Clinical Hospital.

Results. The children in Group I, on an average, were admitted to the hospital on 5±0,39 day of illness (compared to 4,3±0,44 days from the onset of illness in Group II patients, $p<0,05$) and they required a slightly longer period of treatment – 11,7±0,41 hospitalization days (compared to 9,1±0,60 hospitalization days in Group II, $p<0,05$). Before admission to the hospital, children in Group I complained of weakness (100,0% vs. 92,9% in Group II, $p<0,05$), headache (51,2% vs. 23,7%, $p<0,05$), myalgia and arthralgia (62,7% vs. 10,5%, $p<0,05$), sore throat (7,2% vs. 15,8%, $p>0,05$), nasal congestion (46,4% vs. 26,3%, $p<0,05$), loss/change of smell (23,8% vs. none in Group II, $p<0,05$), and loss/change of taste (21,4% vs. none in Group II, $p<0,05$). It should be noted that almost all patients had fever at home (92,9% in Group I vs. 100,0% in Group II, $p>0,05$) and upon admission to the hospital (83,1% vs. 92,1%, $p>0,05$). Similar situation concerned the frequency of cough complaints (77,4% in Group I vs. 89,5% in Group II, $p>0,05$). At the same time, shortness of breath and difficulty in breathing was reported almost equally by patients in both Group I (58,3%) and Group II (63,2%, $p>0,05$). However, it was found that upon admission to the hospital, the average SaO2 level in Group I patients was 94,3% (25,2% of Group I patients required treatment in the intensive care unit) and 95,9% in Group II children (11,1% of Group II patients required intensive care unit treatment, $p<0,05$).

Conclusions. Community-acquired pneumonia in children was confirmed to be of viral etiology due to SARS-CoV-2. The course of the disease is characterized by slightly more severe clinical manifestations compared to confirmed bacterial pneumonia. This may require further study and development of severity scales for diagnosis and optimization of treatment strategies for children with community-acquired pneumonia of different etiology.

Білоус Т.М.

КАРІОЛОГІЧНІ ІНДЕКСИ БУКАЛЬНОГО ЕПІТЕЛІЮ У ДІТЕЙ, ХВОРИХ НА БРОНХІАЛЬНУ АСТМУ, ЗА РІЗНОГО ЇЇ ДЕБЮТУ

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Вступ. Респіраторні захворювання, зокрема, алергічного генезу, являють собою екозалежну запальну групу нозологічних станів, на перебіг яких впливає ціла низка різноманітних факторів. Хронічний запальний процес, який лежить в основі бронхіальної астми (БА), супроводжується порушенням функціонування на рівні клітини, посиленням