

CATAMNESIS OF CHILDREN COVID-19

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Abstract

Purpose: to study the clinical course of a new coronavirus infection in the provision of specialized medical care to children in a hospital and post-mortem follow-up. Results: All patients had laboratory-confirmed infection with SARS-CoV-2 (the result of real-time PCR, specific for SARS-CoV-2, was positive). The patients were divided into severe patients, including 2 (4.6%) patients with severe cases on admission and 32 (74.4%) patients with moderate cases, hospitalization in the intensive care unit was not, the remaining cases 9 (21%) the disease was mild. All sick children of COVID-19 were discharged with recovery. In the observed children of the course of COVID-19, an increase in body temperature was noted 88%, vomiting 58%, diarrhea 68%, cough 77%, shortness of breath 7%. Every fifth patient has pneumonia as the only symptom of the disease. In this case, in order to establish a diagnosis and timely prescribe therapy, it is necessary to conduct an X-ray examination of the chest cavity organs. In children, mild and moderate forms of the disease are predominantly found, and the possibility of radiological verification of pneumonia in a patient with good health is also revealed. Another striking characteristic of COVID-19 is that it affects several vital organs (for example, the lungs, the digestive tract and the nervous system), as evidenced by the clinical course of the disease.

Keywords: COVID-19, children, clinical manifestations.

INTRODUCTION

The small number of children observed does not provide a complete picture of the clinical features of SARS-CBI in children, but compared with adults, most of them had the disease as a mild form of acute respiratory infections. Despite the fact that children get COVID-19 quite rarely, some of them require hospitalization. Most clinically significant coronavirus infections are detected in children under 2 years of age, but older children may have a coronavirus infection at a later stage [8]. But it seemed that older children and adolescents aged 10 to 19 years were just as contagious as adults [6]. Clinical manifestations of COVID-19 are nonspecific and characteristic of most viral respiratory infections. However, the frequency of different manifestations in COVID-19 varies: the most common symptoms are increased body temperature and dry cough, while runny nose and stuffy nose are described by Chinese specialists in less than 5% of cases. It is worth noting that diarrheal syndrome, singled out in the Russian guidelines, also has a low frequency. [1,7]. A large-scale study in South Korea found that children younger than 10 years old transmit the virus to other people much less frequently than adults, although the risk is not zero.

Initial studies published in February-March 2020 showed that in children the possibility of contracting SARS-CoV-2 infection is as high as in adults, but there is less chance of developing





severe clinical forms. Children and young adults who do not have underlying diseases, such as impaired lung function or immunosuppression, have a much lower risk of developing severe forms of COVID-19 than other age groups [9, 10].

Little data are available on the clinical presentation of COVID-19 in selected populations, such as children and pregnant women. Children of all ages can become infected with COVID-19. Gastrointestinal manifestations of infection, with vomiting, diarrhea, and abdominal pain, are much more common in children than in adults. But the classic symptoms of COVID-19 (fever, runny nose, cough, muscle pain) are also common. Most children recover within one to two weeks [2,6].

To date, most authors agree that COVID-19 in children is mild and often asymptomatic (1/5 to 1/3 of cases) [5]. Despite the fact that children get COVID-19 quite rarely, some of them require hospitalization. In general, clinical manifestations of COVID-19 in children are usually milder than in adults [4].

There are relatively few confirmed cases of COVID-19 in infants, and they also have a mild form of the disease [5]. However, more recently, an acute picture of the disease with a hyperresponsive inflammatory syndrome leading to multiple organ failure and shock has been described. This variant of the clinical course is currently referred to as multisystem inflammatory syndrome temporarily associated with COVID-19 in children and adolescents [3].

COVID-19 is known to affect both children and adults, and postvaccinate syndrome is characteristic of any age, regardless of the severity of the disease.

Objective: to study the clinical course of coronavirus infection in the provision of specialized medical care to children in the hospital and follow-up after the disease.

Materials and Methods: A retrospective cohort study was used in this work. Forty-three cases of inclusion of patients from 1 year to 17 years old with confirmed COVID-19 during the pandemic were included in the infectious diseases hospital of Bukhara city. Clinical data were obtained from electronic medical records, including demographic data, history of exposure, signs and symptoms, and laboratory data on admission.

All patients with COVID-19 included in this study were diagnosed in accordance with the recommendations for the diagnosis and treatment of sick children caused by infection with a new coronavirus. Diagnosis of SARS-COV-2 in upper respiratory tract swabs was performed by PCR (Reagent kit for detection of 2019- nCoV coronavirus RNA by PCR). SARS- CoV-2 infection was laboratory confirmed in all patients (real-time PCR result specific for SARS- CoV-2 was positive). Analysis of disease course severity, main clinical manifestations and their correlation with the development of pneumonia, as well as age-specific COVID-19 in children was performed. Duration of inpatient treatment, outcomes and need for intensive care were described.

Clinical data were obtained using data collection forms from electronic medical records. Information collected included demographics age, signs, symptoms of COVID-19, and laboratory data, as well as chest radiographs. Successful treatment of COVID-19 was based on 4 basic principles: early identification of suspicious cases, early isolation, early disease confirmation, and early treatment.



Results and Discussion:

Patients were divided into severe cases, including 2 (4.6%) patients with severe cases on admission and 32(74.4%) patients with moderate cases, no admission to intensive care unit, the remaining 9 (21%) cases had mild course. All COVID-19 sick children were discharged with recovery. The course of COVID-19 was analyzed in children under 1 year of age (n-6); fever was noted between 37-38.00C for 1-2 days (67%), diarrhea (100%), bloating (67%), loss of appetite (83%), and was noted as capricious and restless (83%) and lethargic (17%). In children under 3 years of age (n-9); the disease usually manifested as malaise, fever, cough, shortness of breath, which passed after 2-3 days, but loss of appetite, crankiness persisted. In this group of children a chest X-ray revealed (66.6%) a picture of bronchitis. Preschool children (n-13); were sick for about a week and recovered without complications. They developed febrile body temperature increase, pain in epigastrium and mesogastrium, vomiting, diarrhea, as well as hoarseness of voice and slight stuffiness of nose, sense of smell disorders, dry cough, rare sneezing and restlessness. In this group of children, a chest X-ray revealed (38.5%) a picture of bronchitis and bronchopneumonia.

In children 7 to 17 years old (n-15); there was a slight increase in body temperature and mild malaise, dry occasional cough, olfactory and/or taste disorders, headache, dizziness, irritability, anxiety, and sleep disturbances. In this group of children, chest radiography revealed (27%) a picture of inferior lobe pneumonia. During observation for 6 months after a severe and moderate course of the disease in children were marked by nervous, respiratory and gastrointestinal system. Children in the post-cooperative period were bothered by asthenia, reduced concentration, headaches, rapid fatigue, reduced appetite, abdominal pain, unstable stool, capriciousness, skin rashes, depending on age and course of the disease. The patients noted different signs in the postcoidal period, with increased symptoms on physical exertion.

Signs of postcoid condition in children

Systems	symptoms
Nervous system	asthenia, moodiness, decreased concentration, headaches, fatigue
Respiratory system	frequent colds
Gastrointestinal tract	loss of appetite, stomach ache, irregular stools
Skin	skin rash

Thus, one in five patients has pneumonia as the only symptom of the disease. In this case, to establish the diagnosis and timely prescription of therapy it is necessary to perform radiological examination of the chest cavity organs. In children, mild and moderate forms of the disease predominantly occur, and the possibility of radiological verification of pneumonia in a patient with good health is detected. Another striking characteristic of COVID-19 is that it affects several vital organs, such as the lungs, digestive tract, and nervous system, as evidenced by the clinical course of the disease. Young children will not be characterized by anxiety. A sick child may be cranky, more active, or conversely, lethargic. Muscle pain may cause loud crying, sleep problems, or crankiness in young children.





At follow-up for 6 months after a severe to moderate course of the disease, only minor residual changes in exercise tolerance and pulmonary function were noted in the children.

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