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FEATURES OF REHABILITATION IN CHILDREN WITH RECURRENT BRONCHITIS DURING COVID-19 INFECTION

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One of the reasons for the transition of recurrent forms of bronchitis into chronic, in particular bronchial asthma, is the incompleteness of treatment, the lack of full recovery of the recovery stage in children. In the era of Covid-19- one of the reasons current situation is fact of advantageous use of inconclusive medical therapy,little attention is paid to the development and implementation of medical rehabilitation using non-medicated methods, the efficiency and safety of which is obvious.Kinezioterapiya (KT) is an effective non-drug methods of rehabilitation of children with diseases respiratory organs.

KT is carried out during the period of remission of the disease, which includes general developmental respiratory morning exercises in the air (or in a casual room) daily, 2-3 times a week in the form of simple athletic observation and various play types of children with bronchial obstruction who have undergone coronavirus infection.

The purpose of our work was: to determine the effectiveness of kinesiotherapy in the rehabilitation of children with recurrent bronchitis (RB), proceeding with the syndrome of bronchial obstruction, who have undergone coronavirus infection by the method of determining the parameters of the respiratory function (PRF).

The material for the study was 46 children aged 7 to 14 years who were admitted to inpatient treatment with a diagnosis of obstructive bronchitis, a relapsing course, who had a mild form of coronavirus infection. To study respiratory dysfunctions (FVD), spirography was performed using a spirometer "SPIRO-SPECTR" initially on day 1-2 of hospitalization. All children in this study had COVID-19 in mild 12 (26.0%) and moderate 34 (73.9%) form. Patients reported symptoms of COVID-19, accompanied by fever, dry cough and fatigue. The majority of COVID-19 cases 36 (78.3%) recovered spontaneously without the need for hospitalization.

The results of the analysis showed that in the group of children under study with recurrent bronchial obstruction (RBO), there was a violation of the FVD, which was manifested by a decrease below 80% of the due: FEV1, maximum volumetric velocities, the FEV1 / FVC ratio. At the same time, moderate violations of MOS50 and MOS25 were identified in 33 (71.7%) children with RBO. In terms of indicators, moderate violations of MVL were observed in 16 (34.8)%, FVC and POS in 1/3 of patients with RBO. Moderate impairment of bronchial patency, i.e. a decrease in the Tiffeneau index (IT) to 55% was observed in 12 (16.6%). Higher violations of bronchial patency, i.e. a decrease in IT from 54 to 40% was observed in 7 (15.2%) patients. Moderate indicators of MOS75 in children with RBO - respectively, in 12 (26.0%) subjects. We conducted an experiment to determine the effectiveness of KT in the rehabilitation of children with RBO. After effective rehabilitation with the inclusion of KT, a gradual recovery of FVD is noted.

Thus, VC from 76.4% reached to 98.7% ($p < 0.05$), FVC from 51.4% to 82.3% ($p < 0.001$), FEV1 from 52.3% to 93.1% ($p<0.001$), IT 64.5% to 89.4% ($p < 0.001$). Peak volumetric expiratory flow (PIC) indices increased from 48.8% to 75.6% ($p < 0.001$), MOS75 from 61.2% to 80.3% ($p < 0.001$) and MVV on average from 23.6 liters to 42 , 1 L ($p < 0.05$). Conclusions: Spirometry showed that for children with RBO who had undergone coronavirus infection, the largest number of cases belonged to the obstructive type of ventilation disorders. Comparative analysis of spirometric parameters in children with RBO before and after KT showed the effectiveness of the method of complex early rehabilitation with the inclusion of special breathing exercises. There was a decrease in the frequency of RBO and the duration of exacerbations, a decrease in the number of hospitalizations, a decrease in the dose and cancellation of the drugs used during the period of remission, and the incidence of ARVI over the next years sharply decreased.