

IMPACT OF COVID-19 ON THE COURSE OF ASTHMA IN CHILDREN

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Abstract

Aim: to study the impact of COVID-19 on the course of bronchial asthma in children.

Materials and methods. 45 children with asthma who suffered from COVID-19 were included in the study. The diagnosis of COVID-19 was confirmed by PCR-test or rapid antigen test. The age of the children was 5 to 17 years, the average age was 10.87 ± 1.34 years.

Results. In 31.1% of examined children, COVID-19 was asymptomatic. After recovery from COVID-19, the frequency of asthma daytime symptoms increased by 3 times, being noted in 13.3% of children. The need to use short-term β_2 -agonists increased by 2.5 times, being recorded in 11.1% of patients. Most of the spirometry indicators were increased in children before COVID-19, but did not differ significantly in children of both groups ($p > 0.05$). A significant decrease in the MEF_{25} was noted in children after recovery from COVID-19 (70.72 ± 5.12 vs. 90.82 ± 9.94 , $p < 0.05$). In patients after recovery from COVID-19, a positive post-bronchodilator test (change of $FEV_1 \geq 12.0\%$) was found more frequently (6.7% vs 15.5%), the average increase in FEV_1 value was 1.4 times higher (5.14 ± 1.24 versus 7.32 ± 1.67 , $p > 0.05$).

Conclusion. COVID-19 in children with asthma had a mild or asymptomatic course. Collected data may suggest the impact COVID-19 on asthma control in children and appearance of bronchial hyperresponsiveness in post-COVID-19 period.

Key words: asthma, children, COVID-19, asthma control.

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