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GENDER AND AGE CHARACTERISTICS OF CHILDREN HOSPITALIZED WITH CORONAVIRUS INFECTION IN UZBEKISTAN

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ABSTRACT

At the beginning of the pandemic of the new coronavirus infection SARS-CoV 2, researchers drew attention to the fact that the proportion of children among those infected with COVID-19 was significantly lower than other age groups. **The purpose of the study:** to determine the gender and age patterns of coronavirus infection in the children's contingent of hospitalized patients (on the example of Tashkent city). **Research material and methods:** The study was conducted based on the 3rd city Infectious diseases Hospital in Tashkent city during the years 2020-2021 the time periods when this medical institution was transformed into a covid hospital. **Conclusion:** Thus, among hospitalized children with COVID-19 (on the example of the 3rd city infectious diseases hospital in Tashkent city) during the second wave of the pandemic (I the year of 2021), an increase in the proportion of children under 1 year old was noted, due to the emergence of new strains of the virus characterized by greater involvement in the epidemic process of the children's contingent, as well as the mitigation of quarantine restrictions and, consequently, an increased risk of infection in family clusters.

Key words: COVID-19, Gender, infectious diseases, virus.

INTRODUCTION

At the beginning of the pandemic of the new coronavirus infection SARS-CoV 2, researchers drew attention to the fact that the proportion of children among those infected with COVID-19 was significantly lower than other age groups. In addition, it was also noted that children have a milder course of the disease and complications and adverse outcomes are much less common. *[11, 12, 13, 14, 15]*

With the advent of new strains of coronavirus, the situation has changed significantly and now it is possible to observe a significant increase in the proportion of the children's contingent in the overall structure of the sick. There are very scattered data in the literature on the age structure of children infected with COVID-19. Thus, according to Zhang Y.P, 0.9% of the cases were children 0-9 years old, 1.2% - 10-18 years old. *[16]*. По результатам анализа Dong Y Mo и соавт. [*17]*. 17.6% of patients were children younger than 1 year, 23% - 1-5 years, 24.5% - 6-10 years, 19.3% - 11-15 years, 15.6% - older than 15 years. The Lu X Zhang study indicates that 18.1% of patients were younger than 1 year, 23.4% - 1-5 years, 33.9% - 6-10 years, 24.6% - 11-15 years. [18]. According to Wu Z. Et al., children under 9 years of age and from 10 to 19 years of age accounted for 1% of the total number of registered cases of coronavirus infection. [*19]*

At the same time, the data of different authors differ from each other, in connection with which the study of the sex and age characteristics of the new coronavirus infection in children in Uzbekistan was of fundamental interest.

The purpose of the study: to determine the gender and age patterns of coronavirus infection in the children's contingent of hospitalized patients (on the example of Tashkent city).

Research material and methods: The study was conducted based on the 3rd city Infectious diseases Hospital in Tashkent city during the years 2020-2021 the time periods when this medical institution was transformed into a covid hospital. The study included only hospitalized children who received inpatient treatment at this infectious diseases hospital. During the entire period of operation of the institution as a covid hospital, 1,434 children aged 0 to 18 years were treated.

The design of the study is cross-sectional.

Statistical processing was carried out using standard nonparametric statistical methods.

Results and discussion:

We conducted a comparative analysis of the distribution of children by age in the year 2020 and 2021. The results obtained are shown in Fig. 1 and 2.

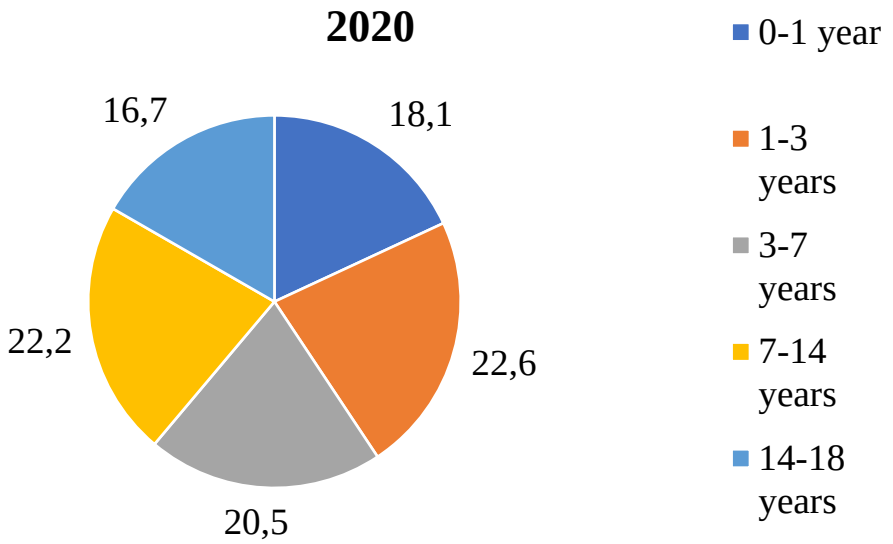

Fig. 1 Distribution of hospitalized children by age (the year 2020)

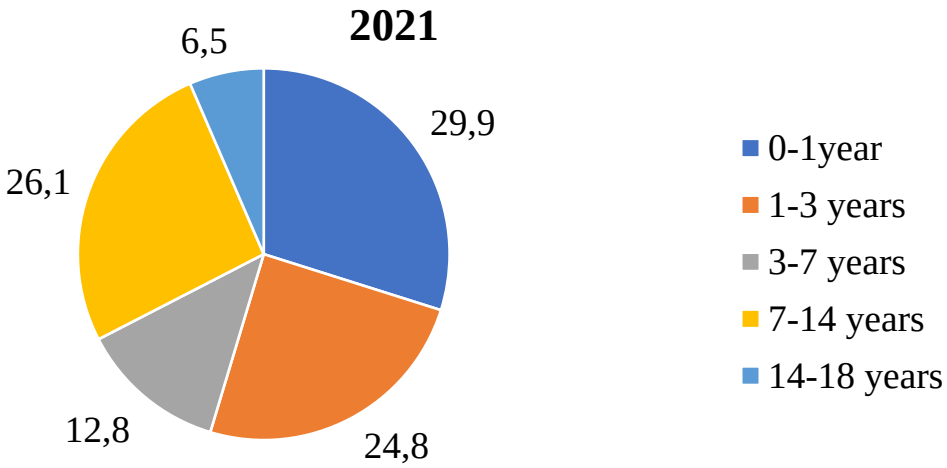

Fig. 2. Distribution of hospitalized children by age (the year 2021)

As can be seen from the data of diagrams 1 and 2, compared with the year 2020, the proportion of young children increased in the year 2021 (29.9% in 2021 versus 18.1% in 2020), and the proportion of adolescents aged 14 to 18 decreased (6.5% in the year 2021 versus 16.7% in 2020). The increase in the proportion of children under 1 year is explained, in our opinion, by a number of reasons. In 2021, quarantine restrictions were significantly relaxed, and therefore opportunities for intra-family contacts expanded, which explains the increased proportion of young children. In addition, it is necessary to take into account the fact that the clinical manifestation of COVID-19 in various age groups and its severity largely depends on the strain of the virus. Thus, the Wuhan strain was distinguished by the fact that in childhood clinical manifestation was either absent or minimal. In this regard, not all cases of coronavirus infection in children have been identified. It cannot be excluded that in the year 2021, after the successful introduction of coronavirus vaccination among adults, vaccination of adolescents was started, which could also affect the ratio of age groups of patients.

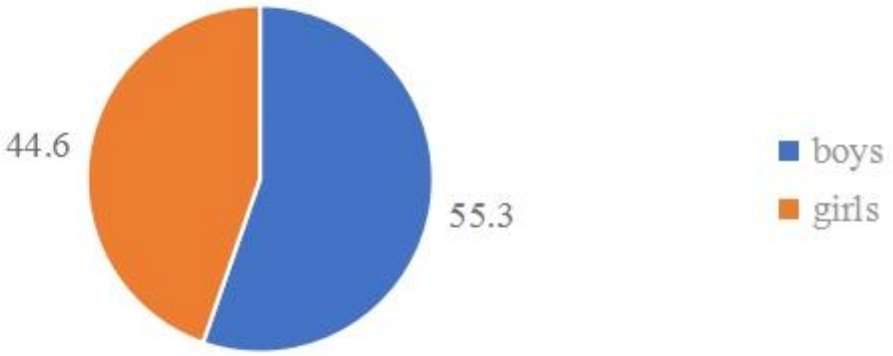

Figure 3. Distribution of children with COVID-19 by gender

As can be seen from Figure 1, in our study, the proportion of male patients was slightly higher (55.3%).

Next, we analyzed the cases of registration of coronavirus infection in children, depending on gender and age. The results obtained are shown in Table 1

Table 1

The year	The year 2020				The year 2021			
Gender	Boys (n=143)		Girls (n=145)		Boys (n=650)		Girls (n=495)	
Age	abs	%	abs	%	abs	%	abs	%
0-1 year old	26	18,2	26	17,9	193	29,7	149	30,1
1-3 years old	32	22,4	33	22,8	173	26,6	111	22,4
3-7 years old	30	21,0	29	20,0	70	10,8	76	15,4
7-14 years old	35	24,5	29	20,0	179	27,5	120	24,2
14-18 years old	20	14,0	28	19,3	35	5,4	39	7,9
P-meaing	0,752				0,033			
	0,015							

Note: If p=values less than 0.05 is valid

When combining data on gender and age, we obtained the following results. In the year 2020, the predominant group of cases were boys of high school age (7-14 years old). In the year 2021 – boys and girls under the age of 1 year (29.7 and 30.1%, respectively).

CONCLUSION

Thus, among hospitalized children with COVID-19 (on the example of the 3rd city infectious diseases hospital in Tashkent city) during the second wave of the pandemic (I the year of 2021), an increase in the proportion of children under 1 year old was noted, due to the emergence of new strains of the virus characterized by greater involvement in the epidemic process of the children's contingent, as well as the mitigation of quarantine restrictions and, consequently, an increased risk of infection in family clusters.

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