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FEATURES OF THE CLINICAL PICTURE OF COVID-19 INFECTION IN FOREIGN STUDENTS OF THE GOMEL STATE MEDICAL UNIVERSITY

Introduction

COVID-19 is severe acute respiratory syndrome which is caused by a virus. The

COVID-19 virus spreads mainly via droplets that are sent out by people while talking, sneezing, or coughing. However, they do not generally stay in the air for long. Similarly, they cannot go farther than 6 feet and this virus can also travel via tiny aerosol particles that have the capacity to linger for around three hours.

COVID-19 demonstrates a clinically diverse manifestation ranging from asymptomatic presentation to critical illness with severe pneumonia, acute respiratory distress syndrome, respiratory failure, or multiple organ failure.

Goal

To study the prevalence and features of the clinical picture of coronavirus infection among foreign students of Gomel State Medical University

Material and methods of research

This cross-sectional survey was conducted among the medical students in Gomel state medical university from 10th January 2022 to 15th February 2023. Instead of collecting data using Google form platform as a survey I used a community based survey.

90 foreign students were interviewed. A self-designed questionnaire was developed and given to the students of from 1st year to 6th year. The study participants were informed about the details of the study objectives for filling the questionnaire and confidentiality at the beginning of the survey, and informed consent was obtained from each participant. It has been disclosed to all the participants that their identity will be kept confidential and the results will be used only for research purposes.

Statistical data processing was carried out using the programs Statistica 13.2 and Medcalc 10.2.0.0 and the standard Microsoft Office Excel (2010), using a shares (p%) analysis. Analysis of the relationship between quantitative parameters was carried out using the test correlation test of the Spearman's (rho), 95 % confidence interval for rho. The results were considered statistically significant at the value of $p < 0,05$.

The results of the research and their discussion

Out of total 90 participants I chose 15 students from each year (1st year to 6th year).

According to our study, it was revealed that the most common symptom of coronavirus infection in foreign students was an increase in body temperature above 38,5 °C – 53 people (58 %). Moreover, it should be noted that the most commonly hyperthermic syndrome were 5–6-year students – 21 people, less often an increase in body temperature to febrile numbers was noted among students of 2 courses – 7 people.

The headache was equally often found – 50 students (56 %) and sore throat – in 50 students (56 %). At the same time, the sore throat most often bothered students of 4th year and 5th year – 10 and

9 students, respectively. Intensive headache was more often noted by students of 2 and 6 courses (10 students each). At the same time, it is to note that students of the studied group does not have a correlation between symptoms such as an increase in body temperature and headache (rho = 0,18; r > -0,439; R < 0,683; p = 0,58).

Shortness of breath was observed in 41 students (46 %), and more often than other shortness of breath was 2 year students (9 people). It should be noted that the presence of febrile temperature reduced the risk of shortness of breath in the studied group of students (rho = -0,6614; r > -0,1409; R <-0,8954; p = 0,0192). The presence of dry cough was noted by 47 students (52 %), while the appearance of dry cough does not increase the risk of shortness of breath (rho = -0,073; r > -0,621; R < 0,523; p = 0,82).

Muscle pains and weakness took place in 34 people, of which more often than others, these symptoms were noted by 6th year students (7 people), and rarely among 3rd year students (4 people). A negative correlation is noted between an increase in body temperature above 38,5 °C and the appearance of muscle pain and weakness (rho = -0,576; r > -0,864; R < -0,00243; p = 0,05).

The presence of cough was noted by 47 students (52 %), while the appearance of cough does not increase the risk of shortness of breath (rho = -0,073; r > -0,621; R < 0,523; p = 0,82), while the most often dry cough was found in 5 year students (11 people), rarely in 6th year students (5 people). The difficulty of nasal breathing and runny nose took place among 34 students (38 %).

Loss of smell was noted by 44 students (49 %), the loss of taste – 38 students (42 %). Most often, 5th year students suffered from loss of smell, and the loss of taste was equally often noted by students of 2, 4 and 6 courses.

The most rarely COVID-19 infection in students of the medical university found dyspeptic syndrome. At the same time, 33 students (37 %) were worried about nausea and vomiting, 37 students found diarrhea (41 %). More often than other nausea and vomiting were observed among 6th year students (7 people), and diarrhea syndrome among 2nd year students (8 people). In case of loss of olfactory, students increased the risk of nausea and vomiting (rho = 0,771; r > 0,353; R < 0,932; p = 0,0034), and the risk of developing diarrhea (rho = 0,773; r > 0,357; R < 0,933; p = 0,0032).

It should be noted that all students with various clinical manifestations of coronavirus infection had contact with COVID-19 infection and a positive PCR test.

Conclusion

Most of the students had clinical manifestations of coronavirus infection. Among the most frequent symptoms can be distinguished: an increase in body temperature of febrile numbers, headache, muscle pain and weakness, cough, shortness of breath. Moreover, the reverse dependence between the increase in body temperature and the development of symptoms such as muscle pain, weakness and shortness of breath is noted. If there is a pronounced positive correlation between the loss of taste and the development of dyspeptic and diarrhea syndromes.

LITERATURE

1. Awareness of SARS-CoV-2 Omicron Variant Infection Among Adults With Recent COVID-19 Seropositivity / S. Y. Joung [et al.] // JAMA Netw Open. – 2022. – P. 53.

2. The Proportion of SARS-CoV-2 Infections That Are Asymptomatic: A Systematic Review / D. P. Oran [et al.] – Ann Intern Med, 2021. – 174 p.

3. Global Percentage of Asymptomatic SARS-CoV-2 Infections Among the Tested Population and Individuals With Confirmed COVID-19 Diagnosis: A Systematic Review and Meta-analysis / Q. Ma // JAMA Netw Open. – 2021. – P. 79.

4. Japanese National Institute of Infectious Diseases. Field Briefing: Diamond Princess COVID-19 Cases, 20 Feb Update [Electronic resource]. – Mode of access: https://www.niid.go.jp/niid/en/2019-ncov-e/9417-covid-dp-fe-02.html – Date of access: 01.03.2023.