Risk Factors for Patients Severe and Critical with Covid-19

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Abstract: In the fight against infectious diseases, the formation of collective immunity among the population is the main tool in the fight against diseases and the prevention of deaths. At the same time, even after vaccination, the occurrence of diseases among the population remains one of the current problems.

Aim: To identify and assess risk factors for those with severe and very sever COVID-19.

Materials and methods: Statistical analysis of the primary medical data of 1862 patients treated at the Republican Special Hospital for Infectious Diseases Zangiota №2, a retrospective research method was used.

Results: When analyzing the patients infected with COVID-19 disease by age and gender groups, it was found that among the age groups under 20 years of age, the prevalence of the disease is almost the same among both sexes, where men are 4.88±0.2%, women are showed that 4.81±0.2%. When analyzing the patients infected with COVID-19 disease by age and gender groups, it was found that the prevalence of infection among both sexes is almost the same among the age groups under 20 years, where men are 4.88±0.2%, women are 4.81 showed that it is ±0.2%. We can explain the fact that the lifestyle and activities of these age groups in our country are almost the same, that is, they study in schools, lyceums and colleges. Among patients aged 20-49, the percentage of men is high (34.4±0.45%), while the percentage of women is slightly lower (29±0.43%).

Conclusion: Factors that cause severe and very severe degree of COVID-19 include the elderly population, male sex, regular smokers, low socio economic populations, and people with chronic diseases was found to be.

Background

In the fight against infectious diseases, the formation of collective immunity among the population is the main tool in the fight against diseases and the prevention of deaths. At the same time, even after vaccination, the occurrence of diseases among the population remains one of the current problems.

As of August 31, 2021, COVID-19 (Coronavirus Disease 2019) has been identified in more than 214 million people worldwide and has caused 3.5 million deaths in almost all countries [1]. In most cases, the symptoms of COVID-19 are expected to be mild. However, in some cases, the disease leads to severe pneumonia and multiple organ failure, with a mortality rate of 3.7% [2]. Preventive measures such as social distancing and sanitary-hygienic measures have been implemented to control infection, but these measures have not always been effective [3].

Therefore, the emergency use of approved vaccines was mandatory [3]. The first vaccination campaigns began in mid-December 2020 in the Middle East and North America and Europe [2]. Despite various scientific debates about the effectiveness of newly developed vaccines and distrust among the population, they have been recognized as the main tool in the fight against the pandemic among the countries of the world [4-9].

The spread of the coronavirus infection and deaths are more frequent, especially among population groups with chronic diseases. If the patient has cardiovascular disease and other comorbidities, then infection with SARS-SoV-2 virus may be the highest predictor of mortality [10]. In addition, several studies have found that people who are not fully vaccinated are more likely to develop severe COVID-19 illness leading to hospitalization and death than fully vaccinated people [11].

Aim

To identify and assess risk factors for those with severe and critical COVID-19

Materials and methods

Statistical analysis of the primary medical data of 1862 patients treated at the Republican Special Hospital for Infectious Diseases Zangiota №2, a retrospective research method was used.

Results

When analyzing the patients infected with COVID-19 disease by age and gender groups, it was found that among the age groups under 20 years of age, the prevalence of the disease is almost the same among both sexes, where men are 4.88±0.2%, women are showed that 4.81±0.2%. We can explain the fact that the lifestyle and activities of these age groups in our country are almost the same, that is, they study in schools, lyceums and colleges. Among patients aged 20-49, the percentage of men is high (34.4±0.45%), while the percentage of women is slightly lower (29±0.43%).

Among the working population in our country, the percentage of men in these age groups is higher than that of women, which means that during the pandemic, the movement of men in public places, restaurants, and public transport due to their work activities, as a result of being in more contact with the disease there for there is a high probability. As of 2020, deasesesamong age groups over 50 years of age, women accounted for 52%, and men accounted for 48% and the incidence rate was 66.2±0.45% and 61±0.46, respectively % (Fig. 1).

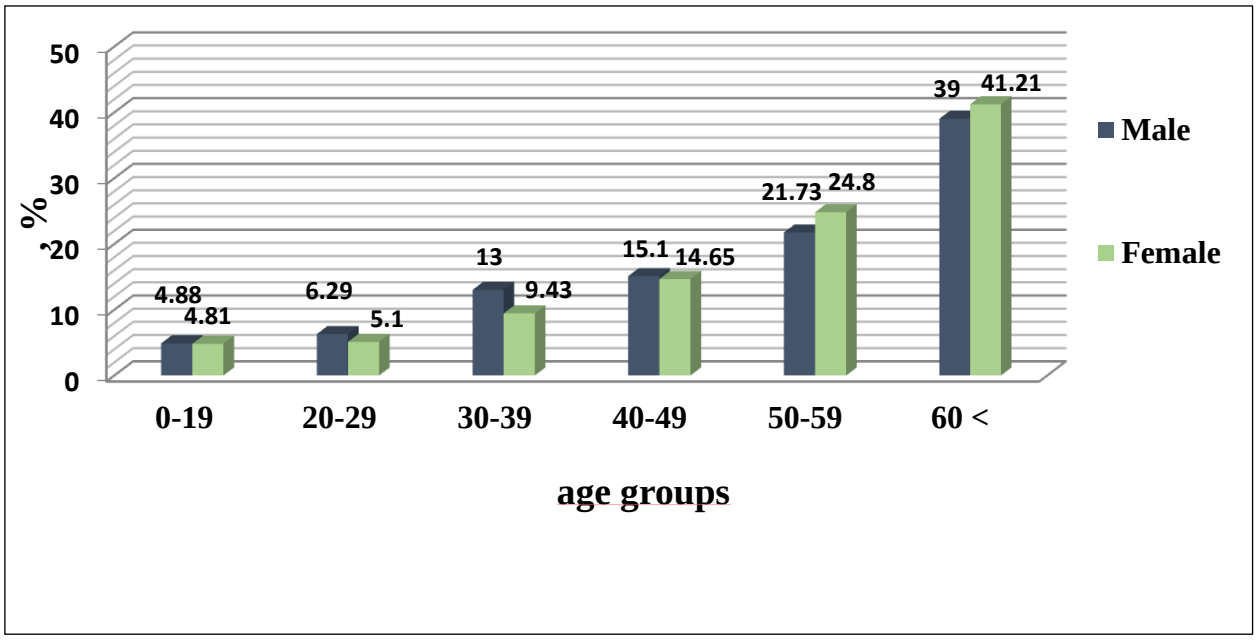

Figure 1. Prevalence of COVID-19 by age and gender groups (%)

Many studies have shown that patients with diabetes have a mortality risk of approximately 3 times higher than the overall mortality rate when they develop a COVID-19 infection [12]. When we analyzed how many of the 1862 patients in our country had chronic diseases and how many days they were treated in the hospital, it was found that 974 (52.3±1.15%) of the patients had chronic diseases, and the average length of their treatment was 12.3±0.17 days. patients without chronic diseases made up 888 (47.7±1.15%) and their treatment duration was 9.5±0.15 days on average. It can be seen from this that the treatment period of patients with chronic diseases from the disease of COVID-19 is

longer.

Another of the common diseases that cause the death of patients is hypertension, which is one of the main causes of death in the world [13, 14, 15]. Potential risk factors are elderly people with chronic diseases, and surveillance of such population groups allows for prognosis and early detection of the disease.

We analyzed and evaluated the extent of chronic diseases in patients with coronavirus infection, as well as the presence of them. This, of course, will greatly contribute to the expansion of the scope and effectiveness of measures aimed at forecasting and treatment of the disease in the future and, as a result, to prevent the transition of patients to severe and extremely severe cases of the disease.

Out of 1,862 patients treated at the Republican Special Infectious Diseases Hospital, 974 patients with co-morbidities had the most common types of diseases and their effect on the course of COVID-19 was retrospective analyzed from the patient cards. According to the obtained data, 31.3±1.32% of patients with concomitant chronic diseases had ischemic heart disease (IHD), stenocardia, vascular diseases and hypertension, 20.9±1.3% had diabetes, 16,8±1.19% Hypertension, 12.7±1.06% chronic respiratory diseases, 3.5±0.58% anemia, 2.9±0.53% obesity, 11.9±0,73% of cases, other diseases were recorded as chronic diseases (Table 1).

Table 1. Comorbidities in patients with COVID-19 (%)

№	Associated diseases	(%)
1	Vascular diseases, stenocardia, IBS and hypertension	31,3±1,32
2	Diabet	20,9±1,3
3	hypertension	16,8±1,19
4	Chronic respiratory diseases and chronic bronchitis	12,7±1,06
5	Anemia	3,5±0,58
6	Obesity	2,9±0,53
7	Other diseases	11,9±0,73

When analyzing the patients infected with COVID-19 disease by age and gender groups, it was found that the prevalence of infection among both sexes is almost the same among the age groups under 20 years, where men are 4.88±0.2%, women are 4.81 showed that it is ±0.2%. We can explain the fact that the lifestyle and activities of these age groups in our country are almost the same, that is, they study in schools, lyceums and colleges. Among patients aged 20-49, the percentage of men is high (34.4±0.45%), while the percentage of women is slightly lower (29±0.43%).

Conclusion

1. Factors that cause severe and critical degree of COVID-19 include the elderly population, male sex, regular smokers, low socio economic populations, and people with chronic diseases was found to be.
2. Patients with chronic diseases have a high probability of contracting COVID-19 (52.3±1.15%), especially among them, diabetes, hypertension, chronic respiratory diseases, and chronic obstructive pulmonary disease account for high proportions (72.2± 1.03%). Moreover patients with these diseases also have severe and critical cases of COVID-19.

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