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COVID-19 clinical findings of patients: Tertiary care hospital in Turkey

Abstract

Aim: The aim of this study is to evaluate the clinical findings of patients (15±84 years) in the course of COVID-19 with the experience of a tertiary hospital.

Materials and methods: The study included a group of 407 (Female: X; Male: Y) patients with symptoms of COVID-19 who have followed up in the Malatya Research and Training Hospital Department Outpatient Clinic of COVID-19 between 23 October, 2020 - 29 December, 2020.

Results: According to the results, the most common signs/symptoms in patients were fever at 25.1%, nausea at 15% and diarrhea at 11.5%, chronic disease history in patients, 28.7% HT, 17.9% tachycardia, and 16.5% asthma. In addition, in the distribution of the patients regarding contact detection, it was determined that 53.8% were contacted, 44.2% were non-contact, and 2% were Viral Capsid Antigen (VCA).

Conclusions: The most common clinical manifestations of COVID-19 infection are fever, dry cough, and shortness of breath. Sore throat, myalgia, headache, and fatigue may follow these symptoms. Gastrointestinal symptoms such as nausea and diarrhea, as well as anosmia, or loss of taste, might be observed on a rare frequency. The presence of comorbid diseases and advanced age both contribute to the worsening of the clinical picture. It has the potential to evolve into clinical ARDS. Clinical findings, in addition to laboratory and radiological data, are critical in determining possible and definitive case definitions.

Keywords: Course of COVID-19-disease, COVID-19, viral infection, symptom

INTRODUCTION

SARSCoV2, also known as COVID-19, is a new type of coronavirus that has reached over 100 countries around the world. At least 186 million people were found to be infected as of 06 August 2021, of whom over 4.265.903 have died (1). This disease has a 14-day incubation period, with symptoms appearing 2–5 days after exposure. In a study conducted in China, this duration was reported to be 4 days in 1099 COVID-19-positive cases, whereas in another study, it was claimed that symptoms appear in 97.5 % of infected patients in 11.5 days and 2.5 % in 2.2 days (2,3).

Considering the clinical spectrum of the disease, besides the asymptomatic form, respiratory failure requiring mechanical ventilation, sepsis, septic shock, and multiorgan failure can be seen. Regarding the severity of the clinical picture followed

by the disease, the severity levels of 44.500 cases, which were confirmed in the report prepared by the Chinese Center for Disease Prevention and Control, were analyzed and no pneumonia or mild pneumonia was found in 81%, severe disease (findings such as dyspnea, hypoxia, more than 50% lung involvement in 24-48 hours, respiratory rate $\geq 30/\text{min}$, oxygen saturation $\leq 93\%$) in 14%, critical illness in 5% of cases (respiratory failure, shock or multiorgan failure) have been reported (4,5).

The spectrum of COVID-19 disease is quite broad. While some patients may be asymptomatic, the process may lead to mortality in some patients. Asymptomatic patients are considered to be of key importance in the COVID-19 pandemic until they show symptoms after being infected (6). Since these patients do not show symptoms, they will not be noticed by the community or health workers and will be a source for the spread of COVID-19, albeit unintentionally. In a research, it is claimed that one out

of 5 infected people will not show symptoms, and therefore this disease will be transmitted to more people than an infected person with symptoms (7).

Patients with mild cases of COVID-19 typically present with upper respiratory tract infection symptoms such as mild fever, dry cough, sore throat, nasal congestion, weakness, headache, and myalgia. Coughing and shortness of breath are common symptoms of mild pneumonia. There is no dyspnea in the presence of severe disease, however, diarrhea can be observed. Upper respiratory symptoms including rhinorrhea, sneezing, and sore throat, and gastrointestinal symptoms like diarrhea, are less common in COVID-19 infection, supporting that the target cells are in the lower respiratory tract (8). In severe cases, fever, dyspnea, respiratory distress, tachypnea, and hypoxia develop. Fever can vary from time to time, it may not be seen even in severe form, and a good evaluation should be made. At this stage, clinical results are significant in the diagnosis, radiological evaluation supports the diagnosis and is used to exclude complications (6,8).

The aim of this study is to evaluate the clinical findings of patients in different age groups (15±84 years) in the course of COVID-19 with the experience of a tertiary hospital.

MATERIAL AND METHODS

This research was designed as a single-center retrospective study evaluating the management of patients with a history of chronic disease who applied with the complaint of COVID-19 infection.

Ethics committee approval of the study was obtained from Malatya Research and Training Hospital Non-Interventional Clinical Research Committee with the number 23536505-000-14871.

Patients who applied with a COVID-19 infection between the dates of Malatya Research and Training Hospital Department Outpatient Clinic of COVID-19 between 23 October, 2020 and 29 December and met the criteria for inclusion in the research sample were included in the study.

The epidemiological characteristics (age, gender) and chronic disease types of the patients constituting the sample of the study were determined. The information about these parameters belonging to the sample of the study was obtained from the patient files and saved in the Microsoft Office Excel file by the researcher.

Statistical Analysis

The SPSS (23.0 Version) software was used to do statistical analyses on the data obtained throughout the study. Descriptive statistical methods (percentage, frequency) were used to evaluate the obtained data.

RESULTS

The distribution of signs/symptoms seen in the patients included in the study is given in Table 1.

Table 1. Distribution of signs/symptoms seen in patients

	n	%
Fever	104	25.1
Nausea	61	15.0
Diarrhea	47	11.5
Vomiting	46	11.3
Loss of smell	27	6.6
Shortness of breath	18	4.4
Weakness	17	4.2
Joint pain	16	3.9
Fever/nausea	15	3.7
Respiratory failure	15	3.7
Lack of taste	15	3.7
Myalgia	14	3.4
Cough	4	1.0
Headache	2	0.5
Backache/fever	2	0.5
Muscle pain	2	0.5
Chill/fever	2	0.5
Total	407	100

According to Table 1., the most common signs/symptoms in patients are; 25.1% fever, 15% nausea, and 11.5% diarrhea.

The distribution of patients' chronic disease histories is given in Table 2.

Table 2. Distribution of patients regarding chronic disease histories

	n	%
Angiography History	25	6.1
Acute Rheumatic Fever (ARA)/ Dysrhythmia	8	1.9
Asthma	67	16.4
Tachycardia	73	17.9
Diabetes Mellitus (DM)	30	7.3
Familial Mediterranean Fever (FMF)	5	1.2
Chest pain	1	0.2
Hypertension (HT)	117	28.7
Congenital Heart/Septal Defects	4	0.9
Heart condition	27	6.6
COPD	18	4.4
Mitral regurgitation	8	1.9
Rhythm disorder	22	5.4
Respiratory failure	2	0.4
Total	407	100

According to Table 2., the most common chronic disease histories in patients are; 28.7% HT, 17.9% tachycardia, and 16.5% asthma.

The distribution of patients regarding whether they have come into contact with other patients with COVID-19 is given in Table 3.

Table 3. Distribution of patients regarding contact detection

	n	%
Contacts	219	53.8
Viral Capsid Antigen (VCA)	8	2.0
Non-contacts	180	44.2
Total	407	100

Table 3 shows the distribution of patients regarding contact detection.

DISCUSSION

Although COVID-19 is most commonly associated with symptoms including fever, dry cough, sore throat, and loss of taste and smell in humans, it can also induce headaches, weakness, and shortness of breath. These symptoms can progress and lead to life-threatening diseases such as ARDS, ARF, cardiac damage, and liver failure in some people (10). In a study of 138 patients with pneumonia in Wuhan, the most prevalent findings were fever 99%, fatigue 70%, dry cough 59%, anorexia 40%, myalgia 35%, dyspnea 31%, and expectorating 27%. Although fever is usually detected, it was found to be below 38 °C in 20% of cases in a study conducted in Wuhan, and it was reported that fever was detected in the initial period of the disease in 44% of 1099 cases in China, and this rate increased to 89% during the hospitalization period (11). Additionally, disorders of the sense of smell and taste are among the reported symptoms, however, they are not indiscriminate. Less common symptoms include headache, sore throat, and runny nose (12). These results are similar to the most common signs/symptoms in patients and are supportive.

Although COVID-19 usually progresses as a mild illness, a small number of people develop life-threatening severe pneumonia and acute respiratory distress (ARDS). The data of 44,672 COVID-19 patients were analyzed by the Chinese Center for Disease Prevention and Control, which found that 81% of symptomatic patients had a mild illness (non-pneumonia or mild pneumonia), 14 percent had severe illness (dyspnea, tachypnea, hypoxia, involvement of more than 50% of the lung within 24-48 hours), and 5% had a critical illness (respiratory failure, shock, multiorgan dysfunction) (13,14).

The major complication of severe disease is ARDS. In a study from Wuhan, ARDS was found in 20% of patients hospitalized with COVID-19 pneumonia (15). In another study in which 201 hospitalized patients in Wuhan were evaluated, ARDS was observed in 41% of the patients (14). Arrhythmia,

cardiomyopathy, and shock are other serious complications that may occur during the course of the disease. It is thought that the disease causes a tendency to coagulation, which is especially evident in intensive care patients and may lead to mortality (16). An exaggerated immune response causes a cytokine release syndrome-like appearance in some patients. Patients experience a continuous fever, and an increase in proinflammatory cytokines and inflammatory markers such as D-dimer, ferritin, and C-reactive protein. These findings are related to life-threatening and fatal illnesses (17).

The disease affects people of all ages, however, it is more common in people who are older and have more comorbid factors. Cardiovascular disease, diabetes, hypertension, chronic lung disease, cancer, and chronic kidney disease are all comorbid factors linked to significant illness and mortality. The American Centers for Disease Control and Prevention (CDC) adds serious obesity and liver disease to these criteria. In 355 patients who died in Italy, the average number of comorbid factors was 2.7%, with no comorbid factors found in three patients. In a research conducted in nursing homes in Washington, the mean age of 101 people was reported as 83, and underlying chronic disease was reported in 94% of these patients, the hospitalization rate was 55% and the mortality was 34% (18,19). According to the results of the research, the most common chronic disease histories in patients are 28.7% HT, 17.9% tachycardia, and 16.5% asthma.

CONCLUSION

COVID-19 is transmitted through droplets shed by infected people. Infection can be transmitted both by ingestion of these droplets through the respiratory tract and by contact of the droplets remaining on the surface with the mucosa (6). According to the findings of the study, 53.8% of the patients who were contact-related in the distribution of contact detection supports these results.

Conflict of interests

The authors declare that there is no conflict of interest in the study.

Financial Disclosure

The authors declare that they have received no financial support for the study.

Ethical approval

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