SCIE DOI: 10.14744/scie.2023.70493
South. Clin. Ist. Euras. 2023;34(4):312-319

Original Article

Evaluation of the Clinical Characteristics of the Patients Admitted to the Emergency Department with the Symptoms or Suspicion of COVID-19

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Submitted: 05.09.2022
Revised: 07.08.2023
Accepted: 08.08.2023

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Keywords: Clinical symptoms; coronavirus disease; COVID-19; emergency department; pandemic.

ABSTRACT

Objective: Emergency departments have been the first step in managing the COVID-19 infection, which has been declared a worldwide pandemic. This study aims to determine the clinical characteristics of patients admitted to the emergency department with the suspicion or symptoms of COVID-19 infection.

Methods: The sample of our study consisted of patients aged 18 and over who were admitted to the emergency department of a tertiary hospital in Istanbul with symptoms or suspicion of COVID-19 between September and December 2020. Five hundred patients with positive RT-PCR test results and 500 patients with negative test results were included in the study. The patients' data were retrieved retrospectively through the hospital's information management system.

Results: The mean age of patients with COVID -19 (-) (53.2±18.1) was lower than that of patients with COVID -19 (+) (59.2±18.4) (p=0.001). The distribution of sex (p=0.61) and occupation (p=0.52) was similar in both groups. The rate of presentation with dyspnea was higher in COVID -19 (+) patients (37.6%) than in the COVID -19 (-) group (22%) (p=0.001). Body temperature measured in the emergency department was higher in COVID -19 (+) patients than in COVID -19 (-) patients (p=0.04). Mean SPO2 was lower in COVID -19 (+) patients (92.3±9.6%) than in COVID -19 (-) patients (96.2±4.8%) (p=0.001). The incidence of ground-glass opacities in the thorax CT was higher (59.6%) in the COVID -19 (+) patient group than in the COVID -19 (-) (47.5%) patient group (p=0.003).

Conclusion: In this study, the clinical features of COVID-19 infection in patients admitted to the emergency department were compared with the literature. Conducting similar studies on COVID-19 infection is essential to update the existing literature and add new data. More comprehensive studies and evidence are needed to effectively manage the diagnosis and treatment process of the epidemic.

INTRODUCTION

In late 2019, a group of patients with pneumonia was reported in the city of Wuhan in China's Hubei province and is believed to be associated with a market selling seafood and fresh meat.[1] This newly discovered virus has been named "severe acute respiratory syndrome coronavirus 2" (SARS-CoV-2) and the disease has been named coronavirus disease 2019" (COVID-19).[2] The World Health Organization declared COVID-19 a pandemic on March 11, 2020.[3]

The most common symptoms in the clinical course of COVID-19 are fever, cough, fatigue, and gastrointestinal symptoms. Factors that increase the severity of the disease include comorbid illnesses and significant laboratory abnormalities.[4] Although COVID-19 has almost the same symptoms as other coronaviruses, it can cause severe interstitial pneumonia, acute respiratory distress syndrome, and subsequently multiorgan failure in elderly patients or in some high-risk individuals with two or more comorbid diseases.[5] Current evidence shows that the main risk factors for poor outcomes are advanced age, a history of ischemic heart disease, hypertension (HT), diabetes mellitus (DM), and chronic lung disease.[6] Further examination and

treatment revealed bilateral pulmonary infiltrates on computed tomography of the chest (CT) and white blood cell (WBC) depletion on laboratory results.[7] Reverse transcriptase polymerase chain reaction testing (RT-PCR) with nasopharyngeal swab specimens from the upper airways and sputum, broncho-alveolar lavage, and tracheal aspirate specimens from the lower airways is required to confirm the diagnosis.[8]

The aim of this study is to describe and investigate the clinical characteristics of patients presenting to the emergency department with symptoms or suspected COVID-19. Although the mortality rate and the number of hospitalizations due to the COVID-19 infection have decreased, many patients are still admitted to the hospital. Given the nationwide and worldwide spread of the epidemic and the risk of new variants manifesting in the coming years, knowledge of the infection is essential for controlling the epidemic and protecting individuals. With the results of this study, patients admitted to the emergency department with a prediagnosis of COVID-19 should be accurately identified, and rapid and effective triage should be performed. Our study, in which we retrospectively investigated the signs and symptoms of COVID-19 infection and the clinical course of patients, is intended to contribute to the literature.

MATERIALS AND METHODS

This retrospective, descriptive study was conducted in the emergency department of a tertiary hospital in Istanbul. Kartal Dr. Lutfi Kirdar City Hospital where the study was conducted is one of the largest tertiary hospitals on the Anatolian side of Istanbul. During the pandemic, like several pandemic hospitals in Istanbul, it served a large population and had accepted approximately 200,000 patient applications by December 2020. The study sample consisted of patients over 18 years of age admitted to the hospital emergency department between September and December 2020 with symptoms or suspected COVID-19 according to ICD 10 (international statistical classification of diseases and related health problems) (patients with ICD code Z03.8 Observation for other suspected diseases and conditions and ICD code U03.7 COVID-19, identified virus). The period from September to December 2020, when the study was conducted, is the period of the second wave of the pandemic in Turkiye, when an increase in patient admissions to the emergency department was observed.

To compare clinical parameters, data from 500 COVID-19 (+) and 500 COVID-19 (−) patients was examined. The Openepi application was used to calculate the sample size of the study. Considering information from the literature, the required sample size was calculated to be 434 with a 95% confidence interval and 80% power based on the prevalence of COVID-19 symptoms at emergency department visits (if the prevalence of diarrhea is 3.5%, the prevalence of diarrhea in COVID-19 positive individuals is 10%).

Patient data were retrieved retrospectively through the hospital's information management system and recorded in the data collection instrument created by the researchers. Sociodemographic characteristics, reason for admission, current clinical signs and symptoms, risk factors, contact and travel history, vital signs measured in the emergency department, laboratory test and radiological imaging results (CT), clinical course, treatment methods used, and discharge status were recorded in the data collection form. In analyzing patient data, the total number of hospital admissions was evaluated, and data on COVID-19 symptoms and suspicions on initial admission were included in the study.

Statistical Analyses

Statistical analyses were performed using the statistical package for the social sciences 21.0 program. Descriptive characteristics were expressed as mean, standard deviation, and percentage. The fit of the data to the normal distribution was analyzed using the Kolmogorov-Smirnov test. Chi-square analysis was used to compare the distributions between groups, and the Student's t-test was used to compare the means because the parametric conditions were met. The significance level was set at a $p<0.05$.

RESULTS

Our aim in this study was to compare the clinical characteristics of coronavirus disease with the literature by examining them in negative and positive patient groups. The sociodemographic characteristics of the patients are shown in Table 1. Among the patients participating in the study, the mean age of patients with COVID-19 (−) was lower than that of patients with COVID-19 (+) (53.2±18.1 vs. 59.2±18.4; p=0.001) (Table 1).

The patients' complaints, vital signs, radiological findings, and RT-PCR test results on admission to the emergency department are shown in Table 2. Among the patients who participated in the study, the rate of admission with fever was higher in the COVID-19 (−) patients (22.8%) than in patients with COVID-19 (+) (16.6%) (p=0.01). The rate of patients with dyspnea (22%) was lower in the COVID-19 (−) patient group than in the COVID-19 (+) patient group (37.6%) (p=0.001). The mean oxygen saturation (SpO_2) of COVID-19 (+) patients (92.3±9.6%) was lower than that of COVID-19 (−) (96.2±4.8) patients (p=0.001). The time between symptom onset and the RT-PCR test was 3.9 days in COVID-19 (+) patients and 3.3 days in COVID-19 (−) patients (p=0.001). In the imaging results of the patients, ground glass opacities were seen more frequently in COVID-19 (+) patients (59.6%) than in COVID-19 (−) (47.5%) patients (p=0.003) (Table 2).

The risk factors and chronic diseases of the patients are shown in Table 3. The rate of advanced age was higher (41%) in patients with COVID-19 (+) than in patients with COVID-19 (−) (29.2%) (p=0.001). The frequency of chronic diseases was higher in COVID-19 (+) patients

Table 1. Sociodemographic characteristics of the patients

	Total	COVID-19 (-)	COVID-19 (+)		
	n (%)	n (%)	n (%)	t / χ^2	p
Age (X±SD)	56.22±18.49	53.2±18.1	59.2±18.4	-5.18	0.001
Gender					
Male	530 (53.0)	265 (53.0)	265 (53.0)	0.00	0.61
Female	470 (47.0)	235 (47.0)	235 (47.0)		
Occupation					
Healthcare worker	53 (5.3)	25 (5.0)	28 (5.6)	0.179	0.52
Other	947 (94.7)	475 (95.0)	472 (94.4)		
History of contact in the last 14 days					
No	768 (76.8)	378 (75.6)	390 (78.0)	1.82	0.37
Yes	232 (23.2)	122 (24.4)	110 (22.0)		

Student t-test; Chi-square test. X: Mean; SD: Standard deviation.

(54.8%) than in COVID-19 (−) patients (34.6%) (p=0.001). When assessing patients' comorbidities, it was found that the incidence of DM was higher in the group of COVID-19 (+) patients (22%) than in the group of COVID-19 (−) patients (11.6%) (p=0.001) (Table 3).

The clinical course of patients admitted to the hospital is shown in Table 4. While 5.8% of COVID-19 (+) patients were transferred from the emergency department to the intensive care unit, this rate was 1.8% in the COVID-19 (−) group. When assessing patients' need for ventilatory

Table 2. Complaints, vital signs, radiological and RT-PCR test results of patients on admission to the emergency department

	Total	COVID-19 (-)	COVID-19 (+)		
Complaints on admission	n (%)	n (%)	n (%)	χ^2	p
Fever	197 (19.7)	114 (22.8)	83 (16.6)	6.08	0.01
Cough	262 (26.2)	120 (24.0)	142 (28.5)	2.56	0.11
Shortness of breathing	298 (29.8)	110 (22.0)	188 (37.6)	29.08	0.001
Loss of taste and smell	28 (2.8)	12 (2.4)	16 (3.2)	0.59	0.44
Headache	76 (7.6)	47 (9.4)	29 (5.8)	4.61	0.03
Fatigue	225 (22.5)	114 (22.8)	111(22.2)	0.04	0.83
Muscle pain	128 (12.8)	74 (14.8)	54 (10.8)	3.58	0.06
Sore throat	84 (8.4)	67 (13.4)	17 (3.4)	32.49	0.001
Nausea - vomiting	92 (9.2)	40 (8.0)	52 (10.4)	1.72	0.19
Diarrhea	60 (60.0)	33 (6.6)	27 (5.4)	0.65	0.42
Other complaints	225 (22.5)	85 (17.0)	140 (28.0)	17.21	0.001
Findings on admission	**n (%)**	**n (%)**	**n (%)**	**t / χ^2**	**p**
Fever (oC) (X±SD)	36.9±0.7	36.6±0.7	37.2±0.6	-0.86	0.04
SpO_2 (X±SD)	94.4±7.8	96.2±4.8	92.3±9.6	7.37	0.001
RT-PCR in the ED					
Not tested	266 (26.6)	17 (3.4)	249 (49.8)	276.61	0.001
Tested	734 (73.4)	483 (96.6)	251 (50.2)		
Time from symptom onset to RT-PCR test (days) (X±SD)	2.7±3.8	1.5±3.3	3.9±3.9	12.46	0.001
Ground glass opacities in thorax CT					
No	278 (45.1)	126 (52.5)	152 (40.4)	8.63	0.003
Yes	338 (54.9)	114 (47.5)	224 (59.6)		

Student t-test; Chi-square test; X: Mean; SD: Standard deviation; RT-PCR: Reverse transcriptase polymerase chain reaction; SpO_2: Oxygen saturation; ED: Emergency department; CT: Computed tomography.

Table 3. Patients' chronic diseases and risk factors for COVID-19

	Total	COVID-19 (-)	COVID-19 (+)		
	n (%)	n (%)	n (%)	χ^2	p
Advanced age	351 (35.1)	146 (29.2)	205 (41.0)	15.28	0.001
Smoking	23 (2.3)	11 (2.2)	12 (2.4)	0.46	0.83
Any chronic disease	447 (44.7)	173 (34.6)	274 (54.8)	17.19	0.001
Diabetes mellitus	168 (16.8)	58 (11.6)	110 (22.0)	19.35	0.001
Hypertension	223 (22.3)	78 (15.6)	145 (29.0)	25.91	0.001
Chronic respiratory disease	90 (9.0)	40 (8.0)	50 (10.0)	1.22	0.27
Cardiovascular disease	114 (11.4)	39 (7.8)	75 (15.0)	12.83	0.001
Cerebrovascular disease	29 (2.9)	12 (2.4)	17 (3.4)	0.89	0.35
Chronic kidney failure	43 (4.3)	15 (3.0)	28 (5.6)	4.11	0.04
Cancer	48 (4.8)	24 (4.8)	24 (4.8)	0	0.99
Other	48 (4.8)	12 (2.4)	36 (7.2)	12.61	0.001

Chi-square test.

Table 4. Clinical course of the patients in hospital

	Total	COVID-19 (-)	COVID-19 (+)		
	n (%)	n (%)	n (%)	χ^2	p
Discharge against medical advice					
Yes	16 (1.6)	5 (1.0)	11 (2.2)	2.29	0.13
No	983 (98.4)	495 (99.0)	488 (97.8)		
Post-ED course					
Death	5 (0.5)	1 (0.2)	4 (0.8)	466.11	0.001
Transfer to ICU	38 (3.8)	9 (1.8)	29 (5.8)		
Transfer to ward	288 (28.8)	88 (17.6)	200 (40.0)		
Treated at home	235 (23.5)	24 (4.8)	211 (42.2)		
Observed at home	411 (41.1)	369 (73.8)	42 (8.4)		
Treatment rejection	9 (0.9)	4 (0.8)	5 (1.0)		
Transfer to another institution	14 (1.4)	5 (1.0)	9 (1.8)		
Need for respiratory support during hospitalization					
No	67 (20.6)	26 (26.8)	41 (18.0)	3.23	0.07
Yes	258 (79.4)	71 (73.2)	187 (82.0)		
Applied respiratory support					
Nasal oxygen support	64 (24.9)	21 (29.6)	43 (23.1)	-	0.09
Oxygen support with mask	110 (42.8)	33 (46.5)	77 (41.4)		
Non-invasive mechanical ventilation	1 (0.4)	1 (1.4)	0		
Invasive mechanical ventilation	82 (31.9)	16 (22.5)	66 (35.5)		

Chi-square test. ED: Emergency department; ICU: Intensive care unit.

support during hospitalization, the need for invasive mechanical ventilation was higher in the COVID-19 (+) patient group (35.5%) than in the COVID-19 (−) patient group (22.5%) (p=0.09) (Table 4).

The blood test results of patients in the emergency department are shown in Table 5. The mean WBC value of the COVID-19 (−) group of patients (9.7±4.8)(×103) was higher than the results of the COVID-19 (+) group (7.9±9.2) (×103) (p=0.004). The mean C-reactive protein (CRP) levels of COVID-19 (+) patients (72.4±72.9) were higher than the results of the COVID-19 (−) group (64.5±74.6) (p=0.20) (Table 5).

Table 5. Blood test results of the patients in the emergency department (n=266)

	Total	COVID-19 (-)	COVID-19 (+)		
	X±SD	X±SD	X±SD	t	p
WBC (10^3/uL)	8.6±7.9	9.7±4.8	7.9±9.2	2.88	0.004
HGB (gr/dl)	12.8±3.7	12.6±2.2	12.9±4.3	-1.10	0.27
PLT (10^3/uL)	236.9±107.1	250.0±114.8	229.1±101.6	2.49	0.01
LY (%)	19.4±12.6	18.8±12.0	19.8±12.8	-0.98	0.33
NE (%)	71.8±14.6	72.7±13.9	71.3±14.9	1.15	0.25
Creatinine (mg/dl)	1.32±3.51	1.2±1.1	1.4±4.3	-0.80	0.42
AST (U/L)	39.6±34.9	33.2± 26.6	43.3±38.6	-3.67	0.001
ALT (U/L)	33.8±35.7	32.5±37.5	34.5±34.6	-0.69	0.49
CK (U/L)	189.8±318.8	115.1±150.4	237.3±382.5	-4.01	0.001
CRP (mg/L)	69.7±73.5	64.5±74.6	72.4± 72.9	-1.28	0.20
Troponine T	0.04±0.13	0.06± 0.19	0.03±0.07	1.67	0.09
D-Dimer	1162.1±1263.5	1166.3±1322.8	1160.3±1241.5	0.04	0.97

Student t-test. X: Mean; SD: Standard deviation. WBC: White Blood Cell; HGB: Hemoglobin; PLT: Plateletes; LY: Lymphocytes; NE: Neutrophils; AST: Aspartate aminotransferase; ALT: Alanine aminorasaminase; CK: Creatine kinase; CRP: C-reactive Protein.

DISCUSSION

Knowledge of the symptoms, risk factors, and clinical course of COVID-19 disease is important for its management. The results of our study show that in the COVID-19 (+) group, 37.6% of patients were admitted to the emergency department with dyspnea. When the patients' concomitant diseases were evaluated, it was found that in COVID-19 (+), 29% of the patients had HT. In the radiological imaging results, it was found that the percentage of ground glass areas in the thorax CT of the COVID-19 (+) patient group was 59.6%.

Looking at data from the beginning of the pandemic to the present, mortality rates are reported to be higher in males than in females.[9] In a systematic review and meta-analysis of 57 studies evaluating sex differences in the acquisition of COVID-19, the pooled prevalence of confirmed COVID-19 cases was 55.00 in males and 45.00 in females, suggesting that COVID-19 is more prevalent in males than in females.[10] In a study of 498 patients conducted by Tanyeri during the first wave of the pandemic, the mean age of patients with positive test results was 45±20 years, and 68% of cases were male, whereas the mean age of patients with negative test results was 56±22 years, and 64% of cases were male.[11] The reason why the male sex is more affected by the disease than the female sex can be explained by the fact that the male sex is more susceptible to infection compared with the female sex, which depends on factors such as hormonal status, immune function, and lifestyle.[9] In our study, we found that the mean age of patients with COVID-19 (+) was higher than that of patients with COVID-19 (−) (59.2±18.4 vs. 53.2±18.1; p=0.001), the sex distribution was similar (p=0.61), and the percentage of female patients was 47%. Based on these data, we can say that there is no association between sex and the acquisition of COVID-19 in our study.

In our study, 5.6% of individuals admitted to the emergency department with symptoms or suspected COVID-19 were health professionals. Determining the prevalence of SARS-CoV-2 infection among health care workers worldwide is critical to controlling the pandemic. The study by Gómez-Ochoa et al.[12] reported that nurses were the most commonly affected and that the prevalence of SARS-CoV-2 among health care workers was 11%.Compared with the general population, the rate of emergency department visits due to COVID-19 is reported to be three times higher,[13] and the test positivity rate is 11 times higher among health care workers working in hospitals.[14] It is undeniable that health care professionals, especially those working in emergency departments, are at risk during the pandemic period. Given all these data, it is of great importance that health care professionals who play an active role in patient care should be vigilant about the use of personal protective equipment.[14]

Thorax CT is a quick and easy method for the early diagnosis of COVID-19. In the systematic review and meta-analysis by Bao et al.,[15] the most common pathologies among the investigated thoracic findings were CT ground-glass opacities (83.31%) and mixed consolidated ground-glass opacities (58.42%).In a study examining the relationship between RT-PCR tests and CT thoracic findings in 167 patients, it was reported that patients with negative RT-PCR test results had areas compatible with COVID-19 in their CT thoracic findings.[16] In our study, the frequency of ground-glass opacities was 59.6% in COVID-19 (+) patients and 47.5% in COVID-19 (−) patients (p=0.003). Although the RT-PCR test results of many patients admitted to our emergency department with suspected COVID-19 were negative, the presence of ground-glass opacities in the thorax CT may be related to the low sensitivity of the test and a negative test result in the early stages of the disease.

Based on the results of a systematic review, the optimal time to perform RT-PCR testing is between the 1st and 7th days after symptom onset, with the highest positive result rate seen at a mean of 6.72 days.[17] In our study, the time between the onset of symptoms and the RT-PCR test was 2.7±3.8 days in all patients, while this period was 3.9 days in COVID-19 (+) patients and 3.3 days in COVID-19 (−) patients (p=0.001). The fact that in our patients the RT-PCR test was performed in the early phase of symptoms might have influenced the test results. The difference in the time of admission of patients to the emergency room could be due to the difference in the perception of the disease, as well as the difficulty in accessing the hospital due to the restrictions in place throughout the country and the fact that patients did not go to the hospital out of concern for COVID-19 infection in the hospital. Nevertheless, it can be said that patients visited the emergency room in a reasonable time. In other studies, the number of days between symptoms and admission to the emergency department (possibly RT-PCR tests) was reported to be about 3 days.[18]

Knowledge of the clinical features of diseases and their prognosis is particularly important for the prevention of infectious diseases.[19] Many studies have reported that fever, shortness of breath, cough, and fatigue are the most common symptoms seen at the onset of the disease.[19-21] In the study by Guan et al.,[22] the most common symptoms in COVID-19 (+) patients were fever (43.8%) and cough (67.8%).In our study, the rate of admission to the emergency department with fever was found to be higher in COVID-19 (−) patients (22.8%) than in COVID-19 (+) patients (16.6%) (p=0.01). The higher rate of fever on admission in our study in COVID-19 (−) patients might be due to the fact that patients thought their fever was related to COVID-19. The fact that fever is the top symptom of COVID-19 in social media and other mass media creates the perception that fever is the most common symptom of coronavirus disease in society. It can be said that this perception affects the number of emergency room admissions by associating fever in individuals with COVID-19, even when it is due to other illnesses.

In the study by Wei et al.,[23] it was reported that 30.1% of patients had leukopenia, 75% had lymphocytopenia, 31.5% had thrombocytopenia, and 60.9% had high CRP. In the study by Zhang et al.,[24] an increase in WBC (p<0.001), neutrophil count (p<0.001), aspartate aminotransaminase (AST) (p<0.001), alanine aminotransaminase (p=0.015), and CRP (p<0.001), and a decrease in lymphocyte count (p<0.001) were reported. In our study, the mean WBC value of the COVID-19 (+) group of patients was found to be lower compared to COVID-19 (−) patients (p=0.004). The CRP values of COVID-19 (+) patients were higher than those of COVID-19 (−) patients (p=0.20).

According to current data, patients with a history of chronic disease are in the risk group for infection with COVID-19 and a poor prognosis.[25] Yang et al.[26] reported that HT (21.1%) and diabetes (9.7%) were the most common comorbidities observed in patients infected with COVID-19. According to the results of a meta-analysis study examining the prevalence of underlying diseases in COVID-19 cases, the most common diseases were HT (16.37%), cardiovascular disease (12.11%), DM (7.87%), chronic renal failure (0.83%), malignant disease (0.92%), and chronic obstructive pulmonary disease (0.95%).[25] In our study, the incidence of HT in COVID-19 (+) patients was 29.0%, and the rate of DM was 22%. The fact that a history of chronic disease increases susceptibility to COVID-19 infection can be explained by the fact that the drugs used and disease symptoms affect cellular immunity. Existing chronic diseases form the basis for further diseases.

As with the SARS and Middle East respiratory syndrome epidemics, mortality has been reported to increase with age in the COVID-19 pandemic.[6] Susceptibility to infection has been reported to be increased in adults over 60 years of age compared with younger or middle-aged groups.[27] In our study, COVID-19 (+) patients were found to be older in age (>65 years) (41% vs. 29.2%) (p=0.001). It can be speculated that the reasons for susceptibility to COVID-19 infection in advanced age are inability to self-care and dependence, taking multiple medications, and insufficient immunity to infections due to additional diseases.

It has been reported that the mortality rate of patients infected with COVID-19 who are in the intensive care unit and require mechanical ventilation is high.[28] In the study by Ciceri et al.,[29] it was reported that 23.1% of 410 patients died, 5.9% were further hospitalized, and 71% were discharged. In a study of 1336 patients in Turkiye, it was reported that 88% of patients were transferred to the ward, 8.5% were treated as outpatients, 3.5% were transferred to the intensive care unit, and 4.5% of cases died.[30] In our study, 0.8% of COVID (+) cases died in the emergency department. While 42.2% of patients were treated at home, 8.4% were followed up at home. 5.8% of patients were transferred to the ICU (p=0.001). While 74% of the negative group required home follow-up without treatment, more than 90% of the positive group required treatment. In the study by Chang et al.,[28] the ICU admission rate was 21%, and it was reported that 69% of cases required invasive mechanical ventilation. In our study, the rate of invasive mechanical ventilation in COVID-19 (+) patients was 35.5%. The need for invasive mechanical ventilation arises in acute respiratory failure in COVID-19 (+) patients. Clinicians should provide mechanical ventilation support in the early period to ensure and maintain respiratory function. In mechanical ventilation applications, attention should be paid to the use of personal protective equipment, and necessary precautions should be taken to avoid contamination with aerosols.

There are some limitations to the study that should be mentioned. One limitation of our study is that it was conducted at a single center. Since it is known that this long-lasting pandemic has different characteristics in each wave,

the period of the study should also be considered when interpreting the results.

Conclusion

In our study, confirming the results of previous studies, the frequency of shortness of breath was higher than other symptoms in COVID-19 (+) patients. Risk factors for the condition in our study included advanced age and chronic disease. In our study, the most common chronic disease in COVID-19 (+) patients was HT, followed by DM. In our study, 0.8% of COVID-19 (+) patients died in the emergency department, and 5.8% of patients were transferred to the intensive care unit.

During epidemics, it is important for disease control and protection of individuals to keep emergency department staff knowledge of triage, diagnosis, and treatment up to date. Patients admitted to the emergency department with a diagnosis and suspicion of COVID-19 should be correctly identified, and their triage performed quickly and efficiently. It is anticipated that the results of this study will contribute to the literature on the diagnosis and triage of COVID-19 in emergency departments.

Ethics Committee Approval

This study approved by the Istanbul University - Cerrahpaşa Non-Interventional Clinical Research Ethics Committee (Date: 15.02.2021, Decision No: 2020/49).

Informed Consent

Retrospective study.

Peer-review

Externally peer-reviewed.

Authorship Contributions

Concept: S.Ş., Z.T.; Design: S.Ş., Z.T., E.Y.; Supervision: Z.T., E.Y.; Data collection: S.Ş.; Analysis: S.Ş., Z.T., E.Y., E.D.K.T.; Literature search: S.Ş., E.D.K.T.; Writing: S.Ş., E.D.K.T., Z.T., E.Y.; Critical revision: Z.T., E.Y.

Conflict of Interest

None declared.

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Acil Servise COVID-19 Semptomları veya Şüphesi ile Başvuran Hastaların Klinik Özelliklerinin Değerlendirilmesi

Amaç: Acil servisler, dünya çapında bir pandemi olarak ilan edilen COVID-19 enfeksiyonunun yönetiminde ilk adım olmuştur. Bu çalışma, COVID-19 enfeksiyonu şüphesi veya semptomları ile acil servise başvuran hastaların klinik özelliklerini belirlemeyi amaçlamaktadır.

Gereç ve Yöntem: Çalışmamızın örneklemini Eylül-Aralık 2020 tarihleri arasında İstanbul'da üçüncü basamak bir hastanenin acil servisine COVID-19 semptomu veya şüphesi ile başvuran 18 yaş ve üzeri hastalar oluşturmuştur. RT-PCR test sonucu pozitif olan 500 hasta ile negatif olan 500 hasta çalışmaya dahil edildi. Hastaların verileri hastanenin bilgi yönetim sistemi aracılığıyla retrospektif olarak değerlendirildi.

Bulgular: COVID-19 (-) hastaların yaş ortalaması (53.2±18.1) COVID-19 (+) (59.2±18.4) olanlara göre daha düşüktü (p=0.001). Cinsiyet (p=0.61) ve meslek (p=0.52) dağılımları her iki grupta benzerdi. COVID-19 (+) hastalarda nefes darlığı ile başvuru oranı (%37.6) COVID-19 (-) gruba (%22) göre daha yüksekti (p=0.001). Acil serviste ölçülen vücut sıcaklığı COVID-19 (+) hastalarda COVID-19 (-) hastalara göre daha yüksekti (p=0.04). SPO_2 ortalaması COVID-19 (+) hastalarda (%92.3±9.6) COVID-19 (-) hastalara (%96.2±4.8) (p=0.001) göre daha düşük bulundu. Toraks BT'de buzlu cam opasitesi insidansı COVID-19 (+) hasta grubunda (%59.6) COVID-19 (-) hastalara (%47.5) göre daha yüksek bulundu (p=0.003).

Sonuç: Bu çalışmada, acil servise başvuran hastalarda COVID-19 enfeksiyonunun klinik özellikleri literatür ile karşılaştırıldı. COVID-19 enfeksiyonu ile ilgili benzer çalışmaların yapılması mevcut literatürün güncellenmesi ve yeni verilerin eklenmesi açısından önemlidir. Salgının teşhis ve tedavi sürecini etkin bir şekilde yönetmek için daha kapsamlı çalışmalara ve kanıtlara ihtiyaç vardır.

Anahtar Sözcükler: Acil servis; COVID-19; Coronavirüs Hastalığı; klinik semptomlar; pandemi.