Demographic And Clinical Characteristics Of Patients Suspected Of Having Covid-19 At A Training And Research Hospital In Turkey

Covid-19 Şüphesi İle Başvuran Hastalardan Pcr Alınanların Demografik Ve Klinik Özellikleri: Eğitim Ve Araştırma Hastanesi Örneği

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ÖZET

Amaç: Çin'in Hubei eyaletindeki Wuhan şehrinde, 12 Aralık 2019'da nedeni bilinmeyen pnömoni olguları görülmüş, 31 Aralık 2019'da hastalık tüm dünya ya duyurulmuş, 11 Mart 2020'de DSÖ bu salgınının bir "pandemi" haline geldiği açıklanmıştır. Halen tüm dünyayı tehdit eden bir halk sağlığı sorunu olarak devam etmektedir. COVID-19 şüphesi ile başvuran ve polimeraz zincir reaksiyonu (PCR) çalışılan hastaların demografik verileri ve klinik özelliklerinin belirlenmesi amaçlanmıştır.

Yöntem: Bu araştırma 13 Mart- 04 Mayıs 2020 tarihleri arasında hastanemize COVID-19 şüphesi ile başvuran ve PCR örneği alınan hastaları kapsamaktadır. Araştırmada kullanılacak veriler hastane bilgi yönetim sisteminden (HBYS) ve Halk Sağlığı Yönetim Sisteminden (HSYS) retrospektif olarak elde edilmiştir. Araştırma için 3.06.2020 tarihli Sağlık Bilimleri Üniversitesi Antalya Eğitim Araştırma hastanesi klinik araştırmalar etik kurulundan (Karar no:7/12) izin alınmıştır. Araştırma retrospektif, kesitsel ve tanımlayıcı olarak planlanmıştır. Sosyodemografik özellikler, labaratuvar ve görüntüleme bulguları, klinik semptomlar ve seyir SPSS 20.0 programı kullanılarak incelenmiştir.

Bulgular: 13 Mart- 04 Mayıs 2020 tarihleri arasında Antalya Eğitim Araştırma hastanesine başvuran ve PCR örneği alınan hasta sayısı 2651 olup % 55.45'i erkek, % 45.55'i kadın hastalardan oluşmaktadır. Başvuran hastalardaki test pozitiflik oranı %3.04 olarak tespit edilmiştir. Hastaların çoğunluğunu erişkin hastalardan olup yaş ortalaması 40±18.19 olarak bulunmuştur. Tüm hastalara PCR bakılmış olup, %2.9'u pozitif olarak saptanmıştır. Pozitif vakaların kadın erkek dağılımının birbirine yakın olduğu tespit edilmiştir. Hastaların % 67.6'sının akciğer tomografisinde COVID-19 pnömonisi ile uyumlu bulgu saptandı. % 41.6'sında bilateral akciğer tutulumu bulunmaktadır. Başvuru semptomları; ateş, öksürük, kas ve eklem ağrısı olarak en sık görülen olduğu bulunmuştur. PCR pozitifliği saptanan hastaların labaratuvar sonuçlarında; lökosit, hemoglobin, platellet, nötrofil/lenfosit oranı, D. Dimer ve ferritin değerleri yüksek oranda normal olarak saptandı.

Sonuç: Covid-19 salgınında, ileri yaş, kronik hastalığı olanların ve erkek hastaların daha fazla etkilendiğini ortaya konulmuştur. İkinci Covid-19 dalgası ya da gerçekleşebilecek farklı pandemi durumları karşısında gerekli çalışmaların yapılabilmesi açısından bu risk grubundaki kişilere yönelik değerlendirmelerin yapılarak, hastanelerde acil eylem planlarının oluşturulması hastalık ile mücadelede yardımcı olacaktır.

Anahtar Kelimeler: Covid-19, PCR, Pandemi.

ABSTRACT

Aim: In the city of Wuhan, in Hubei Province of China, patients with pneumonia with unknown causes were seen on December 12th, 2019, and the disease, COVID-19, was announced to the whole world on December 31st, 2019. On March 11th, 2020, the

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World Health Organization declared that this epidemic was now a pandemic. COVID-19 remains a public health problem that is threatening the whole world. The aim of this study was to determine the demographic data and clinical features of patients who were suspected of having COVID-19 and tested by polymerase chain reaction (PCR).

Methods: This research covers patients who were admitted to our hospital with suspicion of COVID-19 between 13 March and 04 May 2020 and PCR samples were taken. The data to be used in the study were obtained retrospectively from the hospital information management system (HBYS) and Public Health Management System (HSYS). Permission was obtained from the ethics committee of the Health Research University Antalya Training and Research Hospital on 3.06.2020 (Decision no: 7/12). The research is planned as retrospective, cross-sectional and descriptive. Sociodemographic features, laboratory and imaging findings, clinical symptoms and course were examined using the SPSS 20.0 program.

Results: Between March 13th and May 4th, 2020, PCR samples were taken from 2651 patients (55.45% male, 45.55% female) who applied to the Antalya Training and Research Hospital. The test positivity rate of the patients who were admitted was determined as 3.04%. The majority of the patients were adults and the mean age was 40 ± 18.19. Of the examined patient PCR samples, 2.9% were found to be positive. It was determined that the distribution of positive cases was similar in the females and males. Pulmonary tomography of 67.6% of the patients revealed a finding consistent with COVID-19 pneumonia, and 41.6% of the patients had bilateral lung involvement. The most common symptoms on admission included fever, cough, and muscle and joint pain. In the laboratory results of the PCR-positive patients, most of the leukocyte, hemoglobin, platelet, neutrophil/lymphocyte ratio, D-dimer, and ferritin levels were found to be normal.

Conclusion: During the COVID-19 epidemic, it was revealed that older patients with chronic diseases and male patients were more susceptible. The establishment of emergency action plans in hospitals will be helpful by making evaluations for people in this risk group in order to carry out necessary studies against the second wave of COVID-19 or different pandemic situations that may occur.

Keywords: COVID-19, PCR, Pandemic.

INTRODUCTION

The new Coronavirus disease 2019 (COVID-19) outbreak, caused by Coronavirus 2 (SARS-CoV-2), was first seen in December 2019 in the city of Wuhan, in Hubei Province of China, and was generally spread throughout the country. In Wuhan, a number of patients with pneumonia with an unknown cause were observed on December 12th, 2019, and intense hospitalization rates in Wuhan attracted attention (Feng et al. 2020). The disease was announced to the world on December 31st, 2019, when China reported these facts to the World Health Organization (WHO). Coronaviruses are single-chain, positive polarity, enveloped RNA viruses. Because they must have positive polarity, they do not contain RNA-dependent RNA polymerase enzymes, but in their genomes they encode this enzyme. They have rod-like extensions on their surfaces. The clinical pictures caused by coronaviruses can range from colds to severe pneumonia. The reservoir of the virus is not yet known. The disease is transmitted mainly through droplets (Mao et al. 2020). In addition, it was determined that sick individuals can spread the disease by coughing and sneezing. The average number of people that can be infected by one patient was determined as 1.5-3.5. When the epidemiological characteristics of the first cases in China were examined, it was observed that the average incubation period was 2-14 days; however, it was observed to have extended to up to 21 days in some cases (Huang et al. 2020). It was determined that the patients may be infectious 1-3 days prior to symptoms being active (Poyiadji et al. 2020).

The most important and common symptoms of the disease are fever, cough and dyspnea, but it can occur with many different symptoms, such as runny nose, sore throat, muscle and joint pain, and headache. Various immunological tests and polymerase chain reaction (PCR) studies targeting specific genes have been of great importance in the diagnosis of the virus. The most ideal diagnostic test for COVID-19 has been the quantitative real-time PCR (qRT-PCR) method using a nasopharyngeal swab sample. However, since the sensitivity of this method is not very high, the PCR, clinical, and epidemiological data, and if there are examination results, the presence/absence of pneumonia and lung tomography should be evaluated together for the diagnosis of the disease (TUBA, 2020).

The mortality rate of the disease is estimated to be 4.5%, but for the 70-79 age group, this rate increased to 8.0%, while for those over the age of 80, the rate was recorded as 14.8%. These data led to the acceptance that patients over 50 years of age with preexisting conditions, such as hypertension (HT), diabetes mellitus (DM), and cardiovascular diseases (CVDs), were in a high-risk group (Chopra et al. 2020).

By April 20th, 2020, the epidemic in China was basically controlled and but the COVID-19 pandemic remains a major threat to public health worldwide. Although restrictions have been applied to prevent the spread of the disease in many countries, this situation seriously threatens the economies around the world (Xu et al. 2020). The first case of COVID-19 was identified in Turkey on March 11th, 2020. Immediately after this, local measures were taken nationwide to gradually prevent and reduce the spread of the virus (TUBA, 2020). Turkey was one of the countries that took the earliest measures to prevent the spread of COVID-19. In challenging processes such as a pandemic, it is necessary to make simultaneous case follow-ups throughout the course of the pandemic and make projections at the same time. Determining the sociodemographic characteristics and

clinical features of the affected population during a pandemic will be important for conducting treatment protocols and health needs analyses in the future. Therefore, in this study, it was aimed to determine the demographic data and clinical characteristics of patients who were suspected of having COVID-19,whose nasopharyngeal swabs that were subjected to PCR.

MATERIALS AND METHODS

This study included patients who were admitted to the Antalya Training Research Hospital with suspicion of having COVID-19, between March 13th, and May 4th, 2020,whose nasopharyngeal swabs that were subjected to PCR. The data to be used in the study were obtained retrospectively from the hospital information management system and the Public Health Management System. Permission was obtained from the ethics committee of the Medical Research University Antalya Training and Research Hospital on June 3rd, 2020 (Decision No: 7/12). The research was planned as a retrospective, cross-sectional, and descriptive study. Sociodemographic features, laboratory and imaging findings, and the clinical symptoms and course were examined using IBM SPSS Statistics 20.0 (Armonk, NY, USA).

RESULTS

The study included 2651 patients who applied to Antalya Training Research Hospital between March 13th and May 4th, 2020. Nasopharyngeal swab samples were taken from the patients and subjected to PCR. Of the patients, 55.45% (1470) were male and 45.55% were female. Pregnant women constituted 0.53% of the female patients. While the majority of the patients were adults, when their age distribution was examined, it was found that 185 (7%) were under 18 years old, while 1151 (43.4%) were between 18 and 39 years old, 593 (22.4%) were between 40 and 49 years old, and 338 (12.7%) were between 50 and 59 years old. It was determined that there were 203 (7.7%) patients in the 60-69 age group and 181 (6.8%) patients were over 70 years old. The average age of the patients was found to be 40 years old. A rapid antibody test was performed for 8.7% of the patients, and only 23 people were found to be positive. All of the samples collected were subjected to PCR and 2.9% of the patients were found to be PCR-positive (Table 1). Of the patients, 58 (2.18%) had a history of traveling abroad, and when the country distributions were examined, it was seen that the majority of patients had travelled from Saudi Arabia (19%) and the Turkish Republic of Northern Cyprus (17%) (Figure 1).

Table 1 Demographic features of the patients

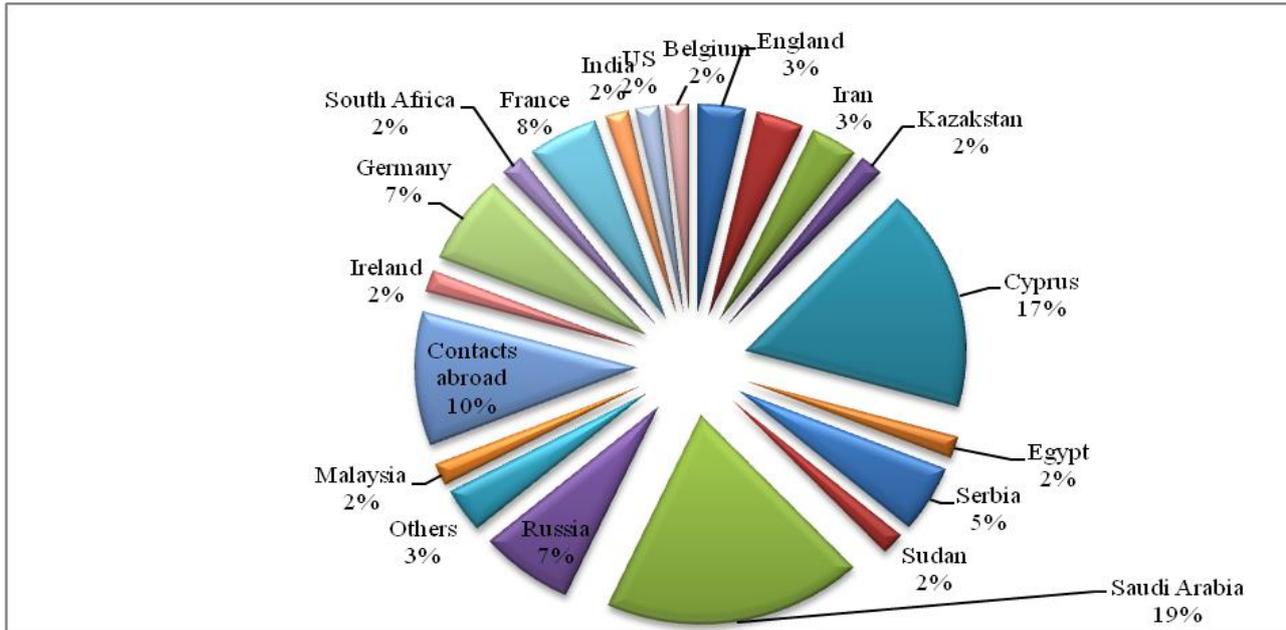|		n	%
Gender	Male	1470	55.5
	Female	1181	44.5
Age (years)	Under 18	185	7.0
	18–39	1151	43.4
	40–49	593	22.4
	50–59	338	12.7
	60–69	203	7.7
	Over 70	181	6.8
Pregnancy	Yes	14	0.5
	No	2637	99.5
Travel history	Domestic	2593	97.8
	Abroad	58	2.2
Rapid antibody test	Negative	209	90.1
	Positive	23	9.9
	Total	232	100.0
PCR	Negative	2574	97.1
	Positive	77	2.9
	Total	2651	100.0

Figure1 Travel history of the patients

Additional diseases were found in 536 (20.21%) of the patients. When chronic diseases were evaluated, the most common was HT in 24.44% (131) of the patients, followed by chronic obstructive pulmonary disease (COPD) in 21.27% (114) of the patients. Additionally, the two chronic diseases were seen together in 15.30% of the patients. When the clinical features of the patients were examined, it was observed that 293 patients were diagnosed with pneumonia. When the pulmonary tomography results of the patients were

evaluated, the results of 46 (8.58%) patients were compatible with bacterial pneumonia, those of 104 (19.40%) patients were compatible with COVID-19, and those of 202 (37.68%) patients were compatible with viral pneumonia. While 1958 (73.86%) patients were followed-up in the clinic, 693 (26.14%) patients were followed-up in the intensive care unit (ICU). Of the patients who were followed up in the ICU, 39 (63%) were intubated and followed up with a mechanical ventilator (Table 2).

Table 2 Clinical features of the patients

		n	**%**
Chronic disease	Obesity	2	0.4
	Cancer	60	11.2
	DM	42	7.8
	HT	131	24.4
	CVD	61	11.4
	COPD	114	21.3
	CKD	16	3.0
	2 chronic diseases	82	15.3
	2 chronic diseases	28	5.2
Pneumonia	Yes	293	11.1
	No	2358	88.9
Lung tomography	Yes	536	20.2
	No	2115	79.8
Lung tomography results	Bacterial infection	46	8.6
	COVID-19	104	19.4
	Mixed infections	76	14.2
	Normal	108	20.1
	Viral pneumonia	202	37.7
Clinical course	Clinical course	1958	73.9
	ICU	693	26.1
Intubation	Yes	39	5.6
	No	654	94.4

DM: diabetes mellitus, HT: hypertension, CVD: cardiovascular disease, COPD: chronic obstructive pulmonary disease, CKD: chronic kidney disease, ICU: Intensive Care Unit

4

When the complete blood counts of the patients were evaluated, while leukocyte counts (WBC) were high in 167 (36.95%) patients, they were normal in 269 (59.51%) patients. While hemoglobin (HGB) levels were low in 311 (67.03%) individuals, the platelet counts were normal in 1258 (76.47%) patients and low in 303 (18.42%) patients. While the neutrophil levels were low in 463 (98.93%) patients, the neutrophil/leukocyte (N/L) ratio was high in 825 (62.17%) patients. Blood urea levels (BUNs) were normal in 745 (48.31%) patients. Aspartate aminotransferase (AST) levels were normal in 745 (81.42%) patients and alanine transaminase (ALT) levels were normal in 744 (70.86%) patients. However, there was a minimal increase in the AST levels in 152 (16.61%) patients and ALT levels in 306 (29.14%) patients. C-reactive protein (CRP) levels were high in 22 (88.0%) patients (Table 3).

Table 3 Laboratory results of the patients

		n	%
Leukocyte (10^/mm^3) Reference range: 4-10·5	Low	16	3.5
	Normal	269	59.5
	High	167	37.0
	Total	452	100.0
HGB (g/dL) Reference range: 12,5-16	Low	311	67.0
	Normal	150	32.3
	High	3	0.7
	Total	464	100.0
Hematocrit (%) Reference range: 37-47	Low	296	66.4
	Normal	146	32.7
	High	4	0.9
	Total	446	100.0
Platelet (10^/mm^3) Reference range: 50-450	Low	303	18.4
	Normal	1258	76.5
	High	84	5.1
	Total	1645	100.0
Neutrophils(%) Reference range: 42·5-73·2	Low	463	98.9
	Normal	5	1.1
	Total	468	100.0
N/L ratio Reference range: 3.5	Low	502	37.8
	High	825	62.2
	Total	1327	100.0
BUN (mg/dL) Reference range: 8-20	Low	54	3.5
	Normal	745	48.3
	High	743	48.2
	Total	1542	100.0
AST (U/L) Reference range:10-50	Low	18	2.0
	Normal	745	81.4
	High	152	16.6
	Total	915	100.0
ALT (U/L) Reference range: 0-35	Normal	744	70.9
	High	306	29.1
	Total	1050	100.0
C-reactive protein (mg/L) Reference range: 0-5	Normal	3	12.0
	High	22	88.0
	Total	25	100.0

The COVID-19 PCR test was positive in 77 of the 2651 patients included in the study. When the age distribution of the PCR-positive patients were evaluated, it was seen that 3 (3.9%) were under 18 years old, 24 (31.2%) were between 18 and 39 years old, 19 (24.7%) were between 40 and 49 years old, 13 (16.9%) were between 50 and 59 years old, 11

5

(14.3%) were between 60 and 69 years old, and 7 (9.1%) were over 70 years old. While 50.6% of the patients were male, 49.4% were female, and 41 (53.25%) of the patients had underlying chronic diseases, comprising HT in 16 (20.8%) patients, DM in 11 (14.3%) patients, COPD in 7 (9.1%) patients, CVD in 2 (2.6%) patients, and CKD in 2 (2.6%) patients. When the lung tomography results of the patients were evaluated, bilateral infiltration compatible with COVID-19 was found in 32 (41.6%) patients, unilateral infiltration was found in 20 (26.0%) patients, and infiltration was found in 25 (32.5%) patients. While 68 (88.3%) of the patients were followed-up in the clinic, 9 (11.7%) patients were followed-up in the ICU. Of the 9 patients who were followed-up in ICU, 6 were intubated and followed-up with a mechanical ventilator (Table 4).

Table 4 Demographic and clinical characteristics of the PCR-positive patients

			n	%
Gender	Male		39	50.6
	Female		38	49.4
Age (years)	Under18		3	3.9
	18–39		24	31.2
	40–49		19	24.7
	50–59		13	16.9
	60–69		11	14.3
	Over 70		7	9.1
Chronic disease	CKD		2	2.6
	Cancer		3	3.9
	DM		11	14.3
	HT		16	20.8
	CVD		2	2.6
	COPD		7	9.1
Lung tomography	Yes		70	90.9
	No		7	9.1
Lung CT	COVID-19	Bilateral	32	41.6
		Unilateral	20	26.0
		None	25	32.5
Clinical course	Clinical course		68	88.3
	ICU		9	11.7
Intubation	Yes		6	7.8
	No		71	92.2

When the 77 PCR-positive patients were evaluated, the most common symptom was found to be fever (81.8%), followed by cough, which was detected in 48 (62.3%) patients. The clinical symptoms of the patients are given in (Table 5).

Table 5 Clinical symptoms of the PCR-positive patients

		n	%
Fever	Yes	63	81.8
	No	14	18.2
Cough	Yes	48	62.3
	No	29	37.7
Respiratory disease	Yes	20	26.0
	No	57	74.0
Back pain	Yes	8	10.4
	No	69	89.6
Muscle and joint pain	Yes	22	28.6
	No	55	71.4
Headache	Yes	12	15.6
	No	65	84.4
Throat pain	Yes	11	14.3
	No	66	85.7
Diarrhea	Yes	3	3.9
	No	74	96.1
Vomiting	Yes	2	2.6
	No	75	97.4
Abdominal pain	Yes	1	1.3
	No	76	98.7
Loss of taste	Yes	20	26.0
	No	57	74.0
Loss of smell	Yes	9	11.7
	No	68	88.3

When the laboratory results of the PCR-positive patients were evaluated, although the whole blood values were within the normal range, low N/L ratios were detected (Table 6).

Table 6 Laboratory results of the PCR-positive patients

		n	%	Minimum	Maximum	Average
Leukocyte ($10^\wedge/mm^3$) Reference range: 4-10.5	Low	9	11.69	6.0	20.4	6.5
	Normal	63	81.82			
	High	5	6.49			
HGB (g/dL) Reference range: 12.5-16	Low	21	27.27	6.9	16.5	12.9
	Normal	53	68.83			
	High	3	3.90			
Platelet ($10^\wedge/mm^3$) Reference range: 50-450	Low	7	9.09	24.0	517	241.9
	Normal	69	89.61			
	High	1	1.30			
N/L ratio Reference range: 3.5	High	56	72.73			4.09
	Low	21	27.27			
Ferritin 23.9-336.2	Low	7	9.09	5	674	166.2
	Normal	64	83.12			
	High	6	7.79			
D-dimer (mg/dL) 0-242	Normal	65	84.42	32	1192	229.2
	High	12	15.58			

DISCUSSION

The COVID-19pandemic has influenced Turkey, as well as the entire world. Although COVID-19 is in the coronavirus family, it has left countries in a difficult situation due to its rapid spread and insufficient studies on vaccination and its treatment, giving rise to more ICU needs and deaths than expected. As of April 20th, 2020, in Turkey, the total number of patients tested was 673980, the total number of cases was 90980, the total number of deaths was 2140, and the total number of patients followed-up in the ICU was 1909. The hospital where this study was conducted provides tertiary care services with a bed capacity of 1230. Since March, 2651 possible cases have been evaluated, nasopharyngeal swab samples were taken, and PCR positivity was detected in 77 patients. The test positivity rate herein was determined as 3.04%. The average test/positivity rate in Turkey was determined as 3.78%; hence, the test/positivity rate of the specific hospital herein was compatible with that in Turkey (Özhasenekler and Tanrıverdi, 2020). When studies conducted around the world on the same topic were examined, the test/positivity rate was 57.9% in the United States and 61.8% in China, which was quite high when compared to the rates of Turkey and this hospital (Lin et al. 2020). When the patients included in the study were grouped according to age, it was found that the distribution was similar to that inother studies (Kapata et al. 2020).

In this study, 55.5% of the patients who were suspected of having COVID-19 were male, and in the positive cases, the distribution of males to females was similar (male 50.6%, female 49.4%). In a study conducted by Huan et al., the distribution was 73% males and 27% females (Huang et al. 2020). However, in another study, the percentage of females was 41.8%. The percentage of females was reported as 44% in a study by Xuxu et al. The gender ratios in Whuan and the data in the literature were compatible. It was seen that males were more affected in Mers COV and Sars COV diseases belonging to the same family; however, further studies on COVID-19 patients are required to make concise conclusions (Badawi and Ryoo, 2016). It was found that the majority of patients who were diagnosed with COVID-19 were false diagnoses as a result of close contact with possible cases. Most people have been contaminated due to the sociocultural characteristics in Turkey, where infection was seen after collective funerals and gatherings, and isolation measures were taken for this purpose. This situation may be encountered in the future; in terms of the second wave of COVID-19 and other possible pandemic situations, it emphasizes how important social isolation is in society in terms of reducing the spread of the disease.

Of the patients who applied to the hospital herein, 58 had a history of traveling abroad. It was determined that the majority of patients had close contact with possible cases. When the comorbid diseases of the PCR-positive 77 patients were examined, it was found that the most common was HT with 20.38% and DM with 14.3%. In accordance with this study, in a meta-analysis involving 46248 patients, the most common comorbid disease was detected as HT and the second most frequent was DM (Yang et al. 2020). In another meta-analysis, the most common comorbid diseases were HT, CVD, DM, COPD, malignancy, and CKD (Emami et al. 2020). Although HT is a common comorbid in many patients diagnosed with COVID-19, to date, COVID-19 and the mechanism of its relationship with HT have not been fully explained (Chopra et al. 2020).

While making the diagnosis of COVID-19, serious problems may still be experienced. Another method used to diagnose the disease, due to low PCR positivity rates, is lung tomography. In the current study, 90.9% of the 77 patients diagnosed with definitive COVID-19 had lung tomography. Pulmonary tomography of 67.6% of the patients revealed a finding consistent with COVID-19 pneumonia, and 41.6% had bilateral lung involvement. In many studies, bilateral lung involvement has been detected as a finding of lung tomography and was consistent with our findings (Song et al. 2020; Zhano et al. 2020). There is no clear clinical finding that distinguishes COVID-19 from other viral diseases. Fever, cough, weakness, anorexia, nausea, vomiting, diarrhea, headache, cough, shortness of breath, and dysfunction of taste and smell are among the symptoms that can be seen with the disease. When the admission symptoms of the patients were examined, fever, cough, and muscle and joint pain were the most common (81.8%, 62.3%, and 28.6% respectively). In the literature, fever and cough were followed by malaise rather than muscle and joint pain, and this difference was compatible with other studies. While fever is more frequently associated with MERS COV (98%) and SARS COV (99%), the absence of the same condition for COVID-19 may cause patients to be misdiagnosed. In order not to spread the disease, the rules of social distancing, mask use, and hand hygiene must be followed.

In patients with a diagnosis of COVID-19, leucopenia, lymphocytosis, lymphopenia, LDH and ferritin and D-dimer elevation have been seen in laboratory tests (Özhasenekler et al. 2020). When the laboratory results of the PCR-positive patients were examined, most of the leukocyte, HGB, platelet, N/L ratio, D-dimer, and ferritin levels were found to be normal. It was thought that the biochemical parameters were not a good guide during diagnosis, but they can be useful in showing the prognosis during the course of the disease. A lymphocyte count of 40 mg/L, ferritin >500 ng/mL, or D-dimer >1000 ng/mL has been reported as a poor prognostic factor in the health COVID-19 guideline (ministry of health o covid guide).

CONCLUSION

An effective and well-tested vaccine against COVID-19 has not yet been invented. Therefore, a key role in the management of this outbreak is to reduce the outbreak peak, also known as flattening the outbreak curve (Bendavid et al. 2020). Looking at the latest data by the WHO, it was seen that there are 4088848 COVID-19 cases and the disease has caused the deaths of 283153 people. The total number of tests conducted to date in Turkey is 1729988, the total number of cases is 153548, and the disease has taken the lives of 4249 people(WHO). Interpretations and analyses

were performed on the Antalya Training Research Hospital data. However, since it is one of the largest hospitals in the region and plays an active role in this process as a pandemic hospital, generalization can be made over the hospital data for the region. Another limitation was that the data covered a certain period of time. In this study, the data obtained during the COVID-19 pandemic revealed that patients who were older, had chronic illnesses, and were male were more affected. It was thought that in order to carry out the necessary studies against the second wave of COVID-19 or different pandemics that may occur, evaluations for the people in this risk group will contribute to the management of the disease processes simultaneously by allowing emergency action plans to be made in hospitals.

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