INTRODUCTION

In studies conducted on reports of pneumonia cases with unknown aetiology in Wuhan, China’s Hubei Province, on 31 December 2019, it was determined that a new coronavirus (2019-nCoV) had not been detected in humans before and that the name of the disease had been accepted as COVID-19. Patients can present with asymptomatic or flu-like symptoms. It may show a different clinical...
course from pneumonia to respiratory failure and may have a fatal course.\textsuperscript{1,2} Fever, cough, shortness of breath, myalgia and fatigue are most common; sputum, haemoptysis, loss of sense of smell and taste, sore throat, headache, chest pain, diarrhoea are also common symptoms of COVID-19 infection.\textsuperscript{3,4} In mild cases, symptoms continue for 2 weeks. It goes on for up to 3-6 weeks in severe cases. Symptoms can get worse in a week or so. Approximately 2-8 weeks after the onset of symptoms, deaths were also seen. It was found that some symptoms also existed in the outpatient clinic controls. The aim of our research was to investigate retrospectively the relationship between the symptoms and general characteristics, initial laboratory values and treatments in patients who had Covid 19 and who applied to the chest diseases outpatient clinic for control after 1 month.

2 | MATERIALS AND METHODS

Three hundred fifteen patients who were diagnosed with COVID-19 and applied to the chest diseases outpatient clinic between May 2020 and August 2020 for control in the 1st month were included in the study. Patient information were collected from the hospital information system and the e-pulse system. Patients' general characteristics (age, gender, history of smoking, treatment regimen and additional diseases), initial symptoms and ongoing symptoms within the 1st month, radiological characteristics, laboratory parameters (haemogram values, inflammatory markers and D-dimer) and hospitalisation status were reported. All patients were diagnosed of COVID-19 by Reverse-Transcriptase Polymerase Chain Reaction (RT-PCR) test. The approval for the study was obtained from the Medical Specialty Education Board of our hospital (689-27/8/2020).

3 | STATISTICAL ANALYSIS

The data obtained were evaluated in a computer environment using the IBM-SPSS (Version 20.0) statistical package program. For descriptive statistics, mean, standard deviation, minimum-maximum, median and 25-75 quartile values were used. Categoric variables were compared with the Pearson Chi-Square test. The Shapiro-Wilk test was used to compare continuous results, and the Mann-Whitney U and Kruskal-Wallis tests were used because, as a result of the normality test, they did not comply with the normal distribution. McNemar and Wilcoxon tests were used for dependent group comparisons. For statistical significance, $P \leq .05$ has been accepted.

4 | RESULTS

Females accounted for 50.2% (n:158) of our patients and their mean age was 47.9 ± 14.8 (19-88) years. 14.3% (n: 45) of the individuals were 65 years of age and older, 34.3% (n: 108) had no findings in their lung computed tomography (CT) and chest X-rays, 20.6% (n: 65) of our patients were smoking and 70.2% (n: 221) of our patients were treated at home. A total of 133 (42.2%) patients had at least one comorbid disease. Hypertension (HT) was determined in 43 (32.3%) patients, asthma was determined in 29 (21.8%) patients, diabetes mellitus (DM) was determined in 25 (18.7%) patients, coronary artery disease (CAD) was determined in 15 (11.2%) patients, chronic obstructive pulmonary disease (COPD) was determined in 12 (9%) patients, neurological disease was determined in 7 (5%) patients, a history of malignancy was determined in 7 (5%) patients (two patients with lung cancer, three patients with thyroid cancer, one patient with brain cancer, one patient with osteosarcoma), hypothyroidism was determined in 5 (3.7%) patients, rheumatological disease was determined in 4 (3%) patients, renal failure 3 (2.2%) patients and bronchiectasis was determined in 3 (2.2%) patients. In addition to treatment with Favipiravir and/or Hydroxychloroquine, 47 (14.9%) patients received empiric antibiotic therapy, 33 (10.4%) patients received corticosteroid therapy and 23 (7%) patients received both antibiotic and corticosteroid therapy, 119 (37.7%) patients received prophylactic enoxaparin and 4 patients received enoxaparin at the therapeutic dose. The general characteristics of the study group are presented in Table 1. When the symptoms of the study group were evaluated, while 7% (n: 22) of the subjects were asymptomatic in the first part of the study, 27.3% (n: 86) of the subjects were found to be asymptomatic in the 1-month period ($P < .001$). It was found that the symptoms of fever myalgia, diarrhea, dyspnoea, cough, loss of taste and smell and sore throat decreased within 1 month of the first period when the contrast of the two periods was examined (Table 2). The symptom distribution of the study group by period is shown in Table 2. The median lymphocyte percent was 26.0 (17.7-33.5) in the first part of the analysis, and 27.0 (21.2-34.2) in the calculation one
TABLE 1  General characteristics of the study group

|                         | N   | %   |
|-------------------------|-----|-----|
| Gender                  |     |     |
| Female                  | 158 | 50.2|
| Male                    | 157 | 49.8|
| Age                     |     |     |
| <65                     | 270 | 85.7|
| ≤65                     | 45  | 14.3|
| Thorax CT               |     |     |
| No                      | 108 | 34.3|
| Ground-glass opacities  | 160 | 50.8|
| Ground-glass opacities  | 4   | 1.3 |
| and thrombus            |     |     |
| Consolidation           | 30  | 9.5 |
| Consolidation + ground- |    |     |
| glass opacities         | 12  | 3.8 |
| Nodular infiltration    | 1   | 0.3 |
| Chest X-rays            |     |     |
| Normal                  | 108 | 34.3|
| Infiltration            | 207 | 65.7|
| Treatment               |     |     |
| Favipiravir             | 185 | 58.7|
| Favipiravir and Hidroksiklorokin | 52 | 16.5|
| Hidroksiklorokin        | 78  | 24.8|
| Smoking behavior        |     |     |
| Non smoker              | 197 | 62.5|
| Ex-smoker               | 53  | 16.8|
| current smoker          | 65  | 20.6|
| Treatment place         |     |     |
| Hospital                | 94  | 29.8|
| Home                    | 221 | 70.2|
| Comorbidities           |     |     |
| No                      | 182 | 57.7|
| Yes                     | 133 | 42.2|

Abbreviation: CT, computed tomography.

month later, when certain laboratory values of the study group were analysed, and there was no difference between the two times. In our study, no statistically significant difference was found between age, gender and smoking status (P > 0.005 for each) when the distribution of individuals with persistent symptoms was examined after 1 month. It was determined that the symptoms had persisted in patients who had been hospitalised, had dual therapy, had comorbid diseases and had more common pathologies in their pulmonary imaging (Table 3). A total of 182 (57.7%) patients had no comorbidities, 115 (63.1%) of those without comorbidity continued to have symptoms in the 1st month. 114 (75.4%) of those with comorbid diseases continued to have symptoms in the 1st month. Table 3 describes the distribution of general characteristics of the study group according to the occurrence of symptoms after 1 month. All patients received corticosteroid therapy had at least one symptom in the 1st month (P < 0.001). Initial D-dimer, initial CRP and the values of platelet, D dimer and CRP in the 1st month were detected to be higher in patients with persistent symptoms when the laboratory values of patients whose symptoms continue after 1 month were examined. No difference was found between the values of initial Neutrophil%, Lymphocyte% and NLR and the 1st month (Table 4). The distribution of laboratory values for the study group based on the presence of symptoms after 1 month is shown in Table 4. In the subgroup analysis, no statistical difference was found in the initial and 1st month

TABLE 2 Distribution of symptoms of the study group by periods

|                         | First | After 1 mo | Test value |
|-------------------------|-------|------------|------------|
|                         | N     | %          | N          | %          | P          |
| Fever                   |       |            |            |            |            |
| No                      | 216   | 68.6       | 310        | 98.4       | <.001      |
| Yes                     | 99    | 31.4       | 5          | 1.6        |            |
| Weakness                |       |            |            |            |            |
| No                      | 248   | 78.7       | 246        | 78.1       | .913       |
| Yes                     | 67    | 21.3       | 69         | 21.9       |            |
| Myalgia                 |       |            |            |            |            |
| No                      | 223   | 70.8       | 273        | 86.7       | <.001      |
| Yes                     | 92    | 29.2       | 42         | 13.3       |            |
| Diarrhoea               |       |            |            |            |            |
| No                      | 305   | 96.8       | 314        | 99.7       | .004       |
| Yes                     | 10    | 3.2        | 1          | 0.3        |            |
| Dyspnoea                |       |            |            |            |            |
| No                      | 223   | 70.8       | 242        | 76.8       | .023       |
| Yes                     | 92    | 29.2       | 73         | 23.2       |            |
| Cough                   |       |            |            |            |            |
| No                      | 195   | 61.9       | 265        | 84.1       | <.001      |
| Yes                     | 120   | 38.1       | 50         | 15.9       |            |
| Loss of taste and smell |       |            |            |            |            |
| No                      | 291   | 92.4       | 313        | 99.4       | <.001      |
| Yes                     | 24    | 7.6        | 2          | 0.6        |            |
| Sore throat             |       |            |            |            |            |
| No                      | 287   | 91.1       | 314        | 99.7       | <.001      |
| Yes                     | 28    | 8.9        | 1          | 0.3        |            |
| Sputum                  |       |            |            |            |            |
| No                      | 304   | 96.5       | 312        | 99.0       | .057       |
| Yes                     | 11    | 3.5        | 3          | 1.0        |            |
| Other                   |       |            |            |            |            |
| No                      | 275   | 87.3       | 288        | 91.4       | .106       |
| Yes                     | 40    | 12.7       | 27         | 8.6        |            |
| At least one symptom    |       |            |            |            |            |
| No                      | 22    | 7.0        | 86         | 27.3       | <.001      |
| Yes                     | 293   | 93.0       | 229        | 72.7       |            |

Note: McNemar Test was used.
NLR values. The distribution of laboratory values by treatment received by the research group is shown in Table 5.

### DISCUSSION

In our study, the female-male ratio and the rate of comorbid diseases were similar to the literature. Cardiovascular diseases, chronic lung diseases and DM were the most common accompanying diseases. Our average age was 47.9 ± 14.8 years of age. The patients 70% were given treatment at home. In the 1st month, all our patients were alive due to mild to moderate cases and younger patients. The fact that we have a younger population compared with China and the USA explains this situation. The infection of COVID-19 can affect both men and women. However, its incidence and severity is higher in males than in females. A study of 138 hospitalised patients with COVID-19 showed that the median age was 56 years and 75 (54.3%) were male while 63 (45.7%) were female. Almost half (46.4%) of patients had an underlying health condition in a retrospective analysis (n = 138) of patients with COVID-19.

The most COVID-19 cases (>70%) show ground-glass opacities with consolidation and interstitial and/or interlobular septal thickening in Thorax CT. COVID-19 predominant CT findings are

| Gender | No symptoms | Symptoms | Test value |
|--------|-------------|----------|------------|
| Female | 41 47.7     | 117 51.1 | .589       |
| Male   | 45 52.3     | 112 48.9 |            |

| Age   | No symptoms | Symptoms | Test value |
|-------|-------------|----------|------------|
| ≤65   | 78 90.7     | 192 83.8 | .121       |
| >65   | 8 9.3       | 37 16.2  |            |

| Thorax CT | No | Ground-glass opacities | Ground-glass opacities and thrombus | Consolidation | Consolidation + ground-glass opacities | nodular infiltration | Test value |
|-----------|----|------------------------|-------------------------------------|--------------|----------------------------------------|---------------------|------------|
| No        | 48 | 55.8                   | 60 26.2                             | 5 5.8        | 2 2.3                                  | 1 0.4               | <.001      |
| Ground-glass opacities | 31 | 36.0                   | 129 56.3                            | 4 1.7        |                                        |                     |            |
| Ground-glass opacities and thrombus | – | –                      | 4 1.7                              |              |                                        |                     |            |
| Consolidation | 5 | 5.8                   | 25 10.9                             |              |                                        |                     |            |
| Consolidation + ground-glass opacities | 2 | 2.3                   | 10 4.4                             |              |                                        |                     |            |
| nodular infiltration | – | –                      | 1 0.4                             |              |                                        |                     |            |

| Chest X-rays | No symptoms | Symptoms | Test value |
|--------------|-------------|----------|------------|
| Normal       | 48 55.8     | 60 26.2  | <.001      |
| Infiltration | 38 44.2     | 169 73.8 |            |

| Treatment | No symptoms | Symptoms | Test value |
|-----------|-------------|----------|------------|
| Favipiravir | 45 52.3     | 140 61.1 | .004       |
| Favipiravir and Hydroxychloroquine | 9 10.5 | 43 18.8 |           |
| Hydroxychloroquine | 32 37.2 | 46 20.1 |           |

| Smoking behavior | No symptoms | Symptoms | Test value |
|------------------|-------------|----------|------------|
| Non smoker | 46 53.5     | 151 65.9 | .117       |
| Ex-smoker | 17 19.8     | 36 15.7  |            |
| Current smoker | 23 26.7     | 42 18.3  |            |

| Treatment place | No symptoms | Symptoms | Test value |
|-----------------|-------------|----------|------------|
| Hospital | 8 9.3       | 86 37.6  | .001       |
| Home | 78 90.7     | 143 62.4 |            |

| Comorbidities | No | Symptoms | Test value |
|---------------|----|----------|------------|
| No | 68 79 | 114 49 | <.001      |
| Yes | 18 21 | 115 51 |            |

Note: $X^2$ test was used.
Abbreviation: CT, computed tomography.
bilateral, peripheral and basal predominant ground-glass opacity, consolidation or both. Air bubble signs and nodules are rare findings. In 3%-13% of COVID-19 pneumonia patients, nodules were identified, which was lower than that seen in other types of viral pneumonia. All but one of the patients had at least one ground-glass or consolidation on their CT scans. Nodular infiltration has been observed in one patient. Ground-glass opacity with or without consolidation is the main feature of the disease. The most common symptoms were fever (98%) followed by cough (76%) with more than half (55%) of patients developing dyspnoea in a study of 41 patients.4 Contraction (55%) of patients developing dyspnoea in a study (n = 3,099) from China. Guan et al reported that 67.8% of COVID-19 patients had cough while 33% had sputum production and 18.7% had shortness of breath.20 In a large study (n = 1,099) from China. Guan et al reported that 67.8% of COVID-19 patients had cough while 33% had sputum production and 18.7% had shortness of breath.20 In a large study (n = 138) of hospitalised COVID-19 patients, 10% of patients reported nausea and diarrhoea. A variety of studies have recorded a wide incidence rate of asymptomatic infections ranging from 1.6% to 56.6%. Asymptomatic patients typically experience none of the aforementioned clinical signs and/or symptoms. According to these studies. Furthermore, this subgroup of patients has few to no radiological imaging anomalies. While some with asymptomatic infection may develop into symptomatic cases, most progress is without clinical deterioration. The most common symptoms recorded in our research were fever, cough, shortness of breath, weakness and myalgia. Seven percent of our patients were initially asymptomatic.

It has been accepted that smoking raises the risk of viral infections and influenza. Similar knowledge has been accepted for the COVID-19 pandemic. Smoking has been reported to be correlated with the incidence of the disease and the seriousness of the clinical course. Of our patients 20.6 per cent (n: 65) have been smoked.

No drugs for effective treatment of COVID-19 have been approved to date. Treatment is tailored to the severity of the condition and individual heterogeneity. Updated periodically from the beginning of the pandemic in our country, according to TC The Scientific Advisory Board of the Ministry of Health Adult Patient Management Guidelines, if there are no contraindications, hydroxychloroquine and/or favipiravir treatment is recommended for patients with COVID-19. 58.7% of our patients received favipiravir, 24.8% received hydroxychloroquine and 16.5% received favipiravir and hydroxychloroquine. The symptoms of patients who received dual therapy at the beginning of treatment were observed to continue in the 1st month. This situation can be explained by the fact that these patients are heavier than other patients at the time of diagnosis and require more hospitalisation. Long COVID is the name used by patients to identify symptoms of COVID-19 that persist after acute illness. The working definitions of "post-acute" (symptoms after 3-4 weeks) and "chronic" (symptoms after 12 weeks) COVID-19 have not yet been officially confirmed. People with long COVID experience a confounding variety of recurrent and fluctuating symptoms, including cough, dyspnoea, fever, sore throat, chest pain, palpitations, cognitive deficiencies, myalgia, neurological symptoms, skin rashes and diarrhoea; some of which also have persistent or intermittent low oxygen saturation. In our study, cough, dyspnoea, weakness and myalgia were the most common in the 1st month. It was determined that the symptoms had persisted in patients who had been hospitalised, had dual therapy, had comorbid
| Treatment | Test value |
|-----------|------------|
| **Favipiravir**<sup>1</sup> |           |
| Median   | 25 th percent | 75 th percent |
| First neutrophil % | 62.15 | 54.80 | 70.20 |
| First lymphocyte % | 26.55 | 17.50 | 33.30 |
| First NLR | 2.45 | 1.69 | 3.65 |
| First platelet | 224.00 | 191.00 | 283.00 |
| First D-dimer | 0.45 | 0.26 | 0.83 |
| First ferritin | 62.90 | 19.10 | 211.00 |
| First CRP | 13.00 | 4.00 | 44.33 |
| **Favipiravir and Hydroxychloroquine**<sup>2</sup> |           |
| Median   | 25 th percent | 75 th percent |
| First neutrophil % | 63.75 | 57.35 | 71.20 |
| First lymphocyte % | 23.25 | 16.75 | 31.95 |
| First NLR | 3.02 | 1.91 | 3.80 |
| First platelet | 221.50 | 182.00 | 255.00 |
| First D-dimer | 0.54 | 0.35 | 0.99 |
| First ferritin | 120.40 | 41.20 | 262.00 |
| First CRP | 9.20 | 3.19 | 23.20 |
| **Hydroxychloroquine**<sup>3</sup> |           |
| Median   | 25 th percent | 75 th percent |
| After 1 month neutrophil % | 57.40 | 52.50 | 65.80 |
| After 1 month lymphocyte % | 25.85 | 17.95 | 32.70 |
| After 1 month NLR | 2.29 | 1.62 | 3.21 |
| After 1 month platelet | 282.00 | 232.50 | 343.50 |
| After 1 month D-dimer | 0.42 | 0.30 | 0.80 |
| After 1 month ferritin | 73.00 | 22.00 | 265.00 |
| After 1 month CRP | 0.40 | 0.00 | 4.50 |

Note: Kruskal-Wallis Test was used. First D-dimer 1-2:0.357 1-3:<0.001 2-3:<0.001, First CRP 1-2:0.422 1-3: <0.001 2-3:0.058, After 1 mo D-dimer 1-2:1.000 1-3:0.024 2-3:0.033, After 1 mo CRP 1-2:<0.001 1-3:1.000 2-3: <0.001.

Abbreviations: CRP, C-reactive protein; NLR, neutrophil/lymphocyte ratio.
diseases and had more common pathologies in their pulmonary imaging. Also, all patients who started corticosteroid therapy at the beginning had at least one symptom in the 1st month. Corticosteroid therapy was thought to be related to the initiation of patients with severe pneumonia. The cause of persistent symptoms is unknown, but it probably involves several different mechanisms of disease, including an inflammatory reaction with a vasculitic component. Recent studies estimated that 10%-20% of people are still ill after 3 weeks and 1-3% are still severely ill after 12 weeks. In individuals with conditions such as asthma, diabetes and autoimmune disorders, mainstream medical opinion considers them more common (though they are also known to occur in those with no pre-existing conditions). 

26,27,33,34

Conditions (no lymphocytopenia or elevated C-reactive protein in particular) are found in those with critical illness and can be used as a marker for in-hospital mortality. 

35

COVID-19 laboratory markers are not specific and are of minimal clinical benefit. 

36

Lymphocytopenia and an increase in CRP values are the most commonly reported laboratory anomalies in the literature. 

27,28

In our study, when the laboratory values of individuals whose symptoms continued after 1 month were examined both the initial and 1 month later D-dimer and CRP values were found to be higher for those with symptoms. D-dimer levels are commonly increased in patients infected with COVID-19. Significantly higher levels are found in those with critical illness and can be used as a prognostic marker for in-hospital mortality.

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CONCLUSION

Symptoms may persist for a long time in hospitalised patients, in patients with COVID-19-related pneumonia and concomitant chronic diseases and in patients with high d-dimer and high CRP at the time of admission. Patients are informed that their symptoms may last for a long time, unnecessary hospital admissions can be avoided.

DISCLOSURE

We declare that there is no conflict of interest, in particular no financial funding potentially relevant to the contents of manuscript.

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**How to cite this article:** Akinci Ozyurek B, Sahin Ozdemirel T, Akkurt ES, et al. What are the factors that affect post COVID 1st month’s continuing symptoms? Int J Clin Pract. 2021;75:e14778. [https://doi.org/10.1111/ijcp.14778](https://doi.org/10.1111/ijcp.14778)