MAAEN JOURNAL FOR MEDICAL SCIENCES

Manuscript 1070

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ORIGINAL STUDY

Assess the Impact of Prophylactic Measures and Adjunctive Medications in Preventing COVID-19 Infections and Lowering the Rates of Affected Cases Worsening: A Comparative Study

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Abstract

Background: **Repurposed medications were the only means of aiding in the prevention and initial treatment of COVID-19 infections in the lack of effective treatment.**

Objective: **The goal of this study is to determine whether preventive measures affect the rate of COVID-19 infection in the contact people and whether age, sex, and medication use correlate to prognosis.**

Methods: **The questionnaire responses were used as a source of data, and 829 patients have a full recovery. With the exception of 114 volunteers who interacted with COVID-19 patients, the patients served as respondents; however, their outcomes were negative.**

Results: **The use of computed tomography (CT), x-rays, clinical signs, and medical expertise is frequently far more prevalent in males than in girls. Depending on the age difference, a CT scan was employed for diagnosis in younger age groups. symptoms that were more prevalent in men and markedly different in women. More women experienced joint pain, gastrointestinal distress, depression, and exhaustion. Before and throughout the infection, every patient in the age groups that were evaluated took one or more preventive measures. Additionally, the fourth and fifth groups used antiviral drugs significantly more than the other groups. Azithromycin, Remedisivir, anticoagulants, and corticosteroids all promote healing and reduce mortality.**

Conclusion: **We concluded a great differences in the complaining between the two sexes, female had more fatigue, depression, GI upset and joint pain. Drugs including azithromycin, Remdesivir, corticosteroids, and anticoagulants are used by patients to treat their infections faster and reduce mortality.**

Keywords: Azithromycin, COVID-19, Clinical symptoms, Dexamethasone, Remdesivir

1. Introduction

SARSCoV-2, also known as the severe acute respiratory syndrome coronavirus, it is confirmed as pandemic by the WHO on 11 March 2020 in Wuhan, the center of Hubei, China, which is most likely devised from zoonotic coronaviruses [1,2]. The clinical manifestations spectrum seems to be varied, and the disease can exist in various forms encompassing; severe pneumonia and respiratory failure, mild upper respiratory illness to asymptomatic illness [3], with numerous patients being hospitalized in Wuhan. This pandemic has challenged society because it is transmitted at worrying rate [4]. Although there are no or very few systematic studies on persons with less severe acute illness who were not hospitalized, the symptoms that remain after the acute illness are known as Long Covid signs, and they last for approximately 3−4 weeks after the acute illness and more than 12 weeks

Received 1 December 2024; revised 24 February 2025; accepted 6 March 2025.
Available online 28 April 2025

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https://doi.org/10.55810/2789-9136.1070

after the acute illness [5]. Patients with diabetes, heart disease, and asthma have a higher chance of developing serious illness from a COVID-19 infection, and they are also more likely to die from it [7]. For this reason, they need to be managed by continuing to take their prescribed medications [8].

As noted currently, COVID-19 has no specific therapy [6]. There have been numerous attempts to develop medications that can treat COVID-19. The US Food and Drug Administration granted emergency use authorisations for chloroquine (CQ) and hydroxychloroquine (HCQ) on March 30, 2020, for the treatment of specific COVID-19 patients [7]. Hydroxychloroquine controls or modulates the manufacture of a number of cytokines that are involved in the cytokine storm, such as interleukins, IL-1, IL-2, and IL-6. Additionally, the HCQ showed antiviral effectiveness via phosphorylating the IFN-β pathway [8].

Another candidate is the macrolide antibiotic azithromycin, which is mostly prescribed to treat infections of the skin, soft tissues, and respiratory tract [6]. Azithromycin inhibits the enzyme furin in host cells, which may inhibit the entry of viruses. Furthermore, It is claimed that macrolides, decrease the production of pro-inflammatory cytokines that could lessen the pro-inflammatory condition brought on by an infection with SARS-CoV-2 [7].

Antiviral drugs like Remdesivir has been shown in animal models and cell culture to suppress coronaviruses, including SARS-CoV and MERS-CoV,it's being concentrated in 2020 as an alternative treatment after COVID-19 disease. Favipiravir is effective against all influenza virus subtypes and strains, including those that are susceptible to or resistant to commercially available neuraminidase and M2 inhibitors. It is a very active and selective inhibitor of the influenza viral RNA polymerase. Its antiviral capabilities were demonstrated in RNA viruses other than favipiravir [8].

Thrombo-prophylaxis with either unfractionated or low molecular weight heparin (LMWH), since these patients are at a greater risk of venous thrombo-embolism (VTE) and acute infections are powerful prothrombotic stimuli, recent evidence submits that LMW heparin has the probable to relieve inflammation in COVID-19 patients: in a study by Shi et al. confirmed that the use of LMW heparin was related with an increase of lymphocytes-percentage and an expressively minor level of IL-6, signifying role of LMW heparin in controlling inflammatory reaction [9].

Low doses of corticosteroids (dexamethasone), that can be used to suppress the production of pro-inflammatory cytokines, so avoiding a protracted cytokine response and hastening the healing of pulmonary and systemic inflammation in pneumonia. Corticosteroids can also raise blood pressure in hypotensive patients and may aid in improving the deregulated immunological response brought on by sepsis, a potential COVID19 consequence. Corticosteroid usage, however, can suppress immunological responses, slow the clearance of pathogens, and promote viral proliferation [10]. This study aimed to show how prevention influences the rate of infection in contact individuals and how drug usage, age, and sex impact the disease's prognosis.

2. Materials and method

2.1. .Study setup and design

A cross-sectional analysis of 829 COVID-19 recovered patients was carried out consisting from 527male and 292 females aged 2–82 years in Basra, southern Iraq during the period from May to September 2020, through the web based structured questionnaire.

2.2. .Data collection, sampling and recruitment

This questionnaire, which had both closed-ended and open-ended questions, was made available to all respondents organizations from Basrah University and the Medical Corps disseminated it online, as did organizations throughout the districts and the city center of Basrah.

The data base was only derived from survey responses where 400 responders should be the sample size. Nevertheless, 829 patients—roughly 429 more students than the estimated sample size—were used as respondents in this investigation. After providing their consent, each respondent was given a questionnaire to fill out on their own. Written in Arabic, the questionnaire included information about demographics, medical history, diagnostic procedures (chest CT scan, blood sample for PCR), COVID-19 symptoms and treatment methods, duration of infection, and the long-term manifestations.

2.2.1. Criteria for inclusion

This study included patients from Basrah City who were completely recovered from COVID-19, recovered within the first four weeks of infection, and had lungs with little deterioration (20 % respiratory insufficiency or less), and did not complain of severe symptoms.

2.2.2. Criteria for exclusion

Patients with chronic conditions other than diabetes, hypertension, respiratory insufficiency (50–70 %), and those who chose not to participate in the trial were excluded.

2.3. Consent

A brief explanation and a completed standard data form were given to each prospective research participant. In compliance with the ethics committee's recommendations and the then-current infection control protocols (which prohibited the distribution of paper documents), consent was collected either verbally or by email. Participants felt secure knowing that all information would be de-identified, stored, and handled in confidence. They also knew they could contact a designated researcher to have a piece of the data removed from the study if they changed their minds. The Human Research Ethics Committee at the University of Basrah's Pharmacy College has accepted the research proposal.

2.4. Data analysis

The Statistical Package for the Social Sciences (SPSS) and the Statistical Analysis System were used to conduct statistical analysis on the acquired data after they had been input into a Microsoft Windows 2010 Excel spreadsheet. Results were documented by mean values and standard deviations (mean ± SD). Variances among groups were evaluated using One-way analysis of variance (ANOVA).

3. Results

3.1. Diagnostic tools

The majority of the diagnostic techniques that are often employed for females and males differ significantly, according to the direct results of the current study. A computed tomography (CT) and other methods like x-rays, clinical signs and experience of the doctors; usually used in observed males significantly more than at observed females. In contrast, nasal smear and blood tests were used significantly more in females than in males. According to the age interval, CT scan was used in a statistically significant manner for diagnosis in young age groups from less than twenty to forty years old, while the nasal smears have been used for diagnosis at ages over 50 years old [11]. The results illustrated in Table 1.

3.2. Patient's history

The results in Table 2 showed that females have significantly higher percentage of hypertension and no chronic diseases in comparison with males group but significantly less smoking than males. The results also show that the first age group has 100 % of the patients with no history of chronic diseases and all age groups reveal significant decline than the first group, furthermore all other age groups differ significantly among them and tendency to decline directly with increasing age.

3.3. Main clinical signs

It was found that the fever, loss of smell and taste, skeletal muscle spasm and cough were highly occurrence both the male and female groups showed notable differences. In contrast depression occurs in a higher percentage in the female group than male group. All other clinical signs were significantly different between males and females.

The result also showed that fever was the main sign that was observed in all age groups. However, there were significant increases in the groups of people more than 40th years old. Loss of smell and taste were highly occurrence at young ages in

Table 1. Different diagnostic tools according to gender and age intervals.

Diagnostic tools	According to gender		According to age interval					
	Male %	Female %	1st g (>20)	2nd g (21–30)	3rd g (31–40)	4th g (41–50)	5th g (51–60)	6th g (<61)
CT scan	15.068	6.007*	57.5	65.73[a]	69.11[a]	44.7[a,b,c]	43.88[a,b,c,e]	24.37[a,b,c,d]
Nasal smear	34.531	44.961*	22.66	15.2[a]	14.28[a]	42[a,b,c]	43.233[a,b,c,e]	65.16[a,b,c,d]
Blood test	10.279	24.418*	13.9	7.4[a]	10.34	8.65[a]	10.77	7.99[a]
Others	40.41	24.612*	5.29	11.95[a]	6.73[b]	3.4[b,c]	2.563[a,b,c,e]	2.501[a,b,c,d]

*Significant differences between male and female ($p < 0.001$).
[a] Refers to significant differences with 1st g.
[b] Significant differences with 2nd g.
[c] Significant differences with 3rd g.
[d] Significant differences with 4th g.
[e] Significant differences ($P < 0.05$) with 5th group.

Table 2. Case history of COVID-19 patients.

Case history	According to gender		According to age interval					
	Male %	Female %	1st g (>20)	2nd g (21–30)	3rd g (31–40)	4th g (41–50)	5th g (51–60)	6th g (<61)
Smoking %	33.56	1.356*	0	68[a]	31[a,b]	4[a,b,c]	1[b,c,d]	2[b,c,d]
D M %	5.47	4.263	0	1.544[a]	5[a,b]	27.65[a,b,c]	32.63[a,b,c,d]	5[a,b,d,e]
Asthma %	4.45	3.682	0	18.27[a]	10[a,b]	13.02[a,b,c]	11.11[a]	1[b,c,e,d]
HT %	2.73	4.844*	0	2.61[a]	30[a,b]	17.61[a,b,c]	27.55[a,b,d]	2[c,d,e]
No chronic disease %	68.15	71.317*	100	78.45[a]	66.66[a,b]	40.74[a,b,c]	27.90[a,b,c]	31.25[a,b,c,d]

*Significant differences between male and female ($p < 0.001$).
[a] Refers to significant differences with 1st g.
[b] Significant differences with 2nd g.
[c] Significant differences with 3rd g.
[d] Significant differences with 4th g.
[e] Significant differences ($P < 0.05$) with 5th group.

comparison with the last three groups. The results lasted at Table 3.

3.4. Persistent signs "Long COVID-19" after recovery from acute COVID-19 infection

This section of the questionnaire required respondents to give information on the clinical signs that be persistent at least 4 weeks after COVID-19 negative results. In general the results revealed that female group showed significant differences than the male group. The most important clinically relevant finding was fatigue, depression, gastric distress, joints pain, tachycardia, and female's g were significant higher than the male. While chest pain, insomnia, loss of smell and taste, respiratory problems and spasm of skeletal muscles pain were non-significant alterations in incidence. The results that can be seen in Table 4 the 5th group has the most incidence of persistence signs than other groups specially fatigue, chest pain and depression.

3.5. Treatment

3.5.1. Adjuvant treatment

The Table 5 below illustrates some of the main characteristics of the aid treatment before and after COVID 19 infection. It was clear that using the vitamin C, vitamin D, Zinc and special exercises to improve breathing with high percentage but; in a non-significant manner in both female and male groups. While the use of some other minerals such as selenium, magnesium, cobalt and calcium, improve diet style and use protective methods Use of folk medicine to prevent infection with viruses, for example inhalation of black tea steam,

Table 3. Main clinical signs of COVID-19.

Clinical signs %	According togender		According to age interval					
	Male %	Female %	1st g (>20)	2nd g (21–30)	3rd g (31–40)	4th g (41–50)	5th g (51–60)	6th g (<61)
Fever	80.13	75.38*	83.33	74.79[a]	80.88[a,b]	92.59[a,b,c]	92[a,b,c]	90.5[a,b,c]
Loss of S&T	57.19	68.60*	100	63.61[a]	66.11[a,b]	46.296[a,d,c]	40[a,b,c,d]	52.08[a,b,c,d,e]
Res.S	28.42	34.30*	33.33	28.658	32.352	38.88[b]	36[b]	56.25[a,b,c,d,e]
Diarrhea	35.95	36.82	16.8	34.34[a]	39.21[a]	44.44[a]	40[a]	28.12[a,c,d,e]
SM spasm	62.32	68.99*	0	67.07[a]	72.058[a]	70.37[a]	28[a,b,c,d]	25[a,b,c,d]
Tonsillitis	41.78	54.84*	66.7	51.01[a]	48.03[a]	51.851[a]	40[a,b,c,d]	35[a,b,c,e]
Cough	55.82	52.13*	12.5	56.82[a]	54.45[a]	66.67[a,b,c]	72[a,b,c]	57.14[a,d,e]
Gastric distress	18.15	25.09*	16.36	22.76[a]	22.05[a]	20.37[a]	32[a,b,c,d]	45.83[a,b,c,d,e]
Depression	21.45	50*	16.06	28.04[a]	26.96[a]	75.92[a,b,c]	36[a,b,c,d]	18.75[b,c,d,e]
Tachycardia	18.15	37.25*	16.22	25.81[a]	32.35[a]	20.37[c]	20[c]	6.25[a,b,c,d,e]
Others	16.09	24.80*	66.71	26.42[a]	35.29[a]	40.74[a,b]	68[b,c,d]	56.25[b,c,d]

*Significant differences between male and female ($p < 0.001$).
[a] Refers to significant differences with 1st g.
[b] Significant differences with 2nd g.
[c] Significant differences with 3rd g.
[d] Significant differences with 4th g.
[e] Significant differences ($P < 0.05$) with 5th group.

Table 4. Most persistent signs after recovery from acute COVID-19 infection.

Persistent clinical signs %	According to gender		According to age interval					
	Male %	Female %	1st g (>20)	2nd g (21–30)	3rd g (31–40)	4th g (41–50)	5th g (51–60)	6th g (<61 g)
Chest pain	16.78	16.27	6.48	29.87[a]	37.74[a,b]	38.88[a,b]	56[a,b,c,d]	18.75[a,b,c,d,e]
Gastric distress	17.80	25.19*	6.46	22.560[a]	22.058[a]	20.370[a]	64[a,b,c,d]	15.62[a,b,c,d,e]
Depression	21.23	36.82*	3.23	28.05[a]	26.96[a]	25.925[a]	72[a,b,c,d]	12.5[a,b,c,d,e]
Joints pain	27.4	32.95*	6.58	26.21[a]	35.29[a,b]	40.740[a,b]	13.6[a,b,c,d]	28.12[a,c,d,e]
Insomnia	14.38	17.05	6.23	16.26[a]	15.68[a]	14.814[a]	56[a,b,c,d]	9.37[b,c,e]
Loss of S&T	16.78	21.12	6.90	24.39[a]	25.98[a]	14.81[abc]	16[a,b,c]	6.25[b,d,e]
Tachycardia	16.78	31.58*	6.23	23.17[a]	29.41[a,b]	20.37[a,c]	40[a,b,c,d]	3.12[b,c,d]
Fatigue	31.5	42.24*	16.12	36.78[a]	42.15[a]	42.59[a,b]	88[a,b,c,d]	12.5[b,c,d,e]
No clinical signs	18.15	12.98*	6.04	16.05[a]	9.8[b]	20.37[a,c]	32[a,b,c,d]	9.37[b,d,e]
Hearing	14.726	16.86	3.81	12.60[a]	13.73[a]	11.11[a]	20[a,b,c,d]	9.38[a,e]
Res. Problems	32.534	33.91	20.83	24.49	38.91[a,b]	22.22[c]	40[a,b,c,d]	22.85[c,e]
SM pain	14.041	23.06*	23.61	14.86[a]	23.15[b]	25.45[b]	28[b]	17.147[d,e]

*Significant differences between male and female ($p < 0.001$).
[a] Refers to significant differences with 1st g.
[b] Significant differences with 2nd g.
[c] Significant differences with 3rd g.
[d] Significant differences with 4th g.
[e] Significant differences ($P < 0.05$) with 5th group.

Table 5. Percentage of adjuvant treatment that used before and after exposure to COVID-19.

Adjuvant treatment %	Male %	Female %	1st g (>20)	2nd g (21–30)	3rd g (31–40)	4th g (41–50)	5th g (51–60)	6th g (<61)
Special exercises to improve breathing	71.23	72.28	85.71	67.35[a]	75[a,b]	90.74[b,c]	96.15[a,b,c]	88[a,b,c,e]
Vit D	74.31	81.59	95.24	77.35[a]	80.88[a]	81.48[a]	92.31[b,c,d]	80.89[a,e]
Vit C	77.05	81.59	10.48	78.37[a]	81.37[a]	85.19[a,b]	80.77[a,b]	88.92[a,b,c,e]
Zinc	70.21	73.26	90.48	71.84[a]	71.08[a]	75.93[a]	88.46[b,c,d]	68[a,d,e]
Others	2.4	23.4*	12.4	23.08[a]	35.5[ab]	32.17[a,b]	31.9[a,b]	28.81[a,c]

*Significant differences between male and female ($p < 0.001$).
[a] Refers to significant differences with 1st g.
[b] Significant differences with 2nd g.
[c] Significant differences with 3rd g.
[d] Significant differences with 4th g.
[e] Significant differences ($P < 0.05$) with 5th group.

chamomile steam, eucalyptus steam. Or drink wormwood or black seed syrup in the female group significantly higher than in males. With some notable differences between groups, all of the examined cases at each age group adopted one or more protecting measures both before and after infection.

3.5.2. Specific treatment

As can be seen from the Table 6 Azithromycin was used in high percentage in all groups compared to other antimicrobial drugs e.g. Levofloxacin, doxycycline, Ceftriaxone. While corticosteroid therapy there was no significant differences between females and males, the first-age group was higher significantly than other age groups. In general it is apparent from this Table 6 that very few patients had used Hydroxychloroquine, or admitted to the intensive care unit. Furthermore plasma therapy, O2 therapy used in low percentage compared with other treatments. The research study by Authors also found that Remdesivir and to a lesser extent other antivirals like Favipiravir, The fourth and fifth groups utilized antivirals significantly more than the other groups, with oseltamivir being used in an increasing way with age.

4. Discussion

4.1. Diagnostic tests for COVID-19

The retrospective-design study has several limitations. First, not all laboratory tests, such as those for ferritin, IL-6, and lactate dehydrogenase, were performed on all individuals Nucleic acid amplification testing (NAAT), The ideal first diagnostic test for COVID-19 is the reverse transcription polymerase chain reaction (RT-PCR) assay, which is most frequently used to diagnose SARS-CoV-2 RNA from the upper respiratory tract. Fast RT-PCR assays appear to function similarly to conventional laboratory-based NAAT testing, even though rapid-

Table 6. Drugs used for treatment of COVID-19 infection.

Treatment %	According to gender		According to age interval					
	Male %	Female %	1st g (>20)	2nd g (21–30)	3rd g (31–40)	4th g (41–50)	5th g (51–60)	6th g (<61 g)
Azithromycin	72.26	74.81	90.48	65.92[a]	76.47[a,b]	72.22[a,b]	88.46[b,c,d]	84.33[b,c,d,e]
Other antimicrobials	27.74	26.16	23.81	4.29[a]	4.901[a]	12.962[a,b,c]	34.66[a,b,d]	44[a,b,c,d,e]
Corticosteroid	17.48	15.7	57.14	9.39[a]	22.55[a,b]	29.62[a,b,c]	42.31[a,b,d]	20.01[a,b,d,e]
Paracetamol and other antipyretic	78.77	81.01	80.96	73.06[a]	83.823[b]	72.22[a,c]	88.46[a,b,d]	68.78[a,c,e]
Hydroxychloroquine	5.14	2.91	0	1.84[a]	4.411[a,b]	12.96[a,b,c]	15.38[a,b,c,d]	4[a,b,d,e]
Remdesivir	21.92	11.82*	47.29	20.4[a]	37.35[a,b]	66.19[a,b,c]	86.92[a,b,d]	88.64[a,b,c,d]
Others antiviral	2.4	23.45*	38.1	18.78[a]	27.45[a,b]	31.48[a,b]	80.77[a,b,c,d]	40.95[b,c,d,e]
Need for O2 therapy %	9.253	9.798	3.33	3.6735	3.92	16.67	18.46	36.02
Plasma therapy %	3.424	0.581*	23.81	0.20[a]	2.82[a,b]	5.56[a,b,c]	11.54[a,b,c]	24.62[b,c,d,e]
Anticoagulants (enoxaparin, Plavix and prospan) %	18.49	12.99	61.90	7.96[a]	15.2[a,b]	14.81[a,b]	26.92[a,b,c,d]	44.28[a,b,c,d,e]
Admitted to the ICUintensive care unit	3.08	0.78	0	0.20[a]	1.47[a,b]	3.70[a,b,c]	3.85[a,b,c]	4.31[a,b,c,d,e]

*Significant differences between male and female ($p < 0.001$).
[a] Refers to significant differences with 1st g.
[b] Significant differences with 2nd g.
[c] Significant differences with 3rd g.
[d] Significant differences with 4th g.
[e] Significant differences ($P < 0.05$) with 5th group.

isothermal assays might be less sensitive. Second problem was the compliance of the patient, some of them refused to be introduced to the hospital. In addition to deficiency of effective antiviral drugs, lack of standard supportive treatment, also; use of high doses of steroids participates in obvious results in some patients. Interpretation of the results of our study may be adequate because of the relatively large sample size of more than 900 survivors who cure during 2 weeks with non-serious persistence clinical signs. An alternative to NAAT is antigen testing, which may be completed more quickly and easily and yields results in less than an hour, compared to some NAATs. Typically, NAATs are more sensitive than antigen testing [12]. Additionally, patients have the option to self-collect nasal swabs at home or on the spot. In hospitals, nasopharyngeal samples can be taken if an upper respiratory tract specimen tests negative and there is a suspicion of a lower respiratory tract infection [13].

A study done by Zhou F. et al. reported that the lymphocyte count in the survivors COVID-19 patients was significantly increased after one week of illness, while among non-survivors, significant lymphopenia was not discovered until after death. Non-survivors had considerably higher serum ferritin, lactate dehydrogenase, IL-6, and d-dimer, a high-sensitivity cardiac troponin I, than survivors did [19]. When the disease first started, lactate dehydrogenase increased in both survivors and non-survivors, while troponin I rapidly rose in non-survivors starting on day 16 and decreased in survivors starting on day 13. In general a positive test can confirm the diagnosis. If preliminary testing was negative, while clinical suspicion persists, performing a second test can enhance diagnostic yield. Low-complexity rapid tests can provide results rapidly. Moderate-to high-complexity, laboratory-based tests the results provide in several hours. However, the time for high-complexity tests to receive a result need several hours [14].

4.2. Patient history

According to recent SARS-CoV-2 data, people with COVID-19 who also have other diseases may be at higher risk of mortality. The current assay was conducted to evaluate the association between diabetes and COVID 19 patient survival because diabetes mellitus is the most prominent comorbidity [15]. The current assay's results are consistent with a study by Parveen, R. et al. 2020 [16], which found no significant correlation between gender and the lower frequency of diabetes patients among survivors. A comparatively high percentage of survivors were found among patients aged 30 to 50. Huang C. et al.'s 2020 research findings further highlight the seriousness of the conditions and mortality linked to ageing and comorbidities, particularly hypertension, which is more common than diabetes and heart disease [15].

4.3. Main clinical signs

The infection duration is approximately 10 days from the onset of symptom to recovery in non-

severe Cases. Both asymptomatic and symptomatic people experience progressed symptoms in the lower respiratory tract within the first week of symptom onset, while the upper respiratory tract experiences viral peak. Compared to individuals who experienced symptoms and recovered within three weeks, a viral load cleared more quickly in asymptomatic patients. But there are a lot of unanswered questions regarding the disease's post-recovery course, including its psychological and physical after effects [16]. Prolonged COVID-19 infections can have negative effects on the kidneys, heart, gastrointestinal tract, or nervous system. They can also cause long-term pulmonary issues. Comorbidities, age, smoking history, length of hospital stay, severity of the sickness (requiring ICU admission, for example), and kind of therapy (antiviral or corticosteroid) all affect the course of COVID-19 infection disease. Only mental health is not studied [17].

The clinical symptoms of COVID-19 patients who require administration in critical care units (ICU) have been described in several publications. In SARS-Cov-2 infected individuals, comorbidities and old age, namely diabetes and hypertension, are believed to be threat factors patients' condition severity and mortality. There are several clinical indications of diseases ranging from mild to lethal, with major sequelae such as severe pneumonia, ARDS, septic shock, and acute heart damage. Patients with severe illnesses experience hypoxemia and dyspnea within a week of the disease's beginning, which quickly develops into ARDS or end-organ failure. Insufficient prognostic factors (MuLBSTA score) include lymphopenia, bacterial co-infection, smoking history, chronic health conditions like hypertension, and age greater than 60 [18].

The COVID-19 patients have a fever, myalgia or lethargy, and a dry cough when they are first admitted. Even while most patients are thought to have a good prognosis, chronic underlying diseases such diabetes, hypertension, coronary heart disease, etc., and older patients often have worse outcomes [19].

4.4. Persistence symptoms

Patients refer to symptoms of COVID-19 that last longer than the acute illness as “long” COVID. There is currently no official definition for the terms “chronic” (clinical signs after three months) and “post-acute” (clinical signs beyond three to four weeks) in the COVID-19 [2]. A positive COVID-19 test is not necessary for the diagnosis of either post-acute or chronic disease because many patients were never tested [20].

4.5. Treatment

The World Health Organization classified the coronavirus (COVID-19) illness to be a pandemic on March 11, 2020, which caused health services to get distracted and the general population to become isolatedIn the absence of an effective cure, the only accessible treatments for COVID-19 infections were assisted prevention and primary treatment with repurposed medicines, which may block viral transmission. Several drugs have been proved in the conflict against COVID-19, even though a majority of drugs have been mentioned as latent candidates, their clinical value and safety profile are not completely evaluated. Various first-line medicines, including hydroxychloroquine, are utilized as antimalarial. But because HCQ can have fatal adverse effects, there is disagreement about whether it should be used as a preventive measure [21].

COVID-19 is treated with azithromycin (AZM), a macrolide antibiotic with a well-established safety profile that possess antiviral, immunomodulatory, and therapeutic properties [When an infection is first developing, HCQ and/or AZM medications are commonly used to treat it. However, when the illness worsens and symptoms lessen or intensify, the immunomodulatory impact of HCQ may make treatment more hazardous. At this point, patients may find relief from strong anti-inflammatory and/or anticoagulant medications [22]. These results agree with the present work, Patients who took azithromycin during the first stage of the disease or after making sure of coming into contact with infected persons had faster recovery and less in the progression of the disease to advanced stages. Combination of HCQ and AZM in late stages could be toxic particularly in patients with cardiac problems; HCQ seem like the main cause of cardiac toxicity [23].

A study done Beigel, J. H., et al.; 2020 reported that Remdesivir acts by inhibition of the RNA-dependent, RNA-polymerase of the virus, with in-vitro inhibitory action against SARS-CoV-1. Remdesivir was early branded as a promising therapeutic candidate for Covid-19 for its capability to in vitro inhibition of SARS-CoV-2, reduced pulmonary levels of the virus and lung damage. At the current study, Authors noted that, increase in the percentages of survivors who used Remdesivir, in the last three groups, which can illustrative that these groups, may be survived due to Remdesivir

administration, especially at the last group which considered as risk group [24].

Remdesivir Intravenously is sufficiently tolerated, however in seriously ill patients, it not provides significant clinical or antiviral effects, though; clinically meaningful differences could not be excluded. Continuing studies with high sample sizes must be conducted [25].

5. Conclusion

There were substantial variations in the symptoms between males and females. The crucial clinically significant conclusion was that women were more likely to have fatigue, sadness, stomach distress, and joint pain. All of the examined cases used one or more preventative measures both before and during infection, regardless of age group. Also, compared to other groups, the fourth and fifth groups utilized antivirals far more frequently. Drugs including azithromycin, Remdesivir, corticosteroids, and anticoagulants are used by patients to treat their infections faster and reduce mortality. History of chronic diseases worsen the prognosis of COVD19 patients.

Source of Funding

No external funding was received for this study.

Conflict of Interest

The authors declare no conflict of interest or specify any potential conflicts.

Ethical Approval

The study was approved by The Human Research Ethics Committee at the University of Basrah/College of Pharmacy.

Data Availability

All relevant data are included within the article.

Author Contributions

Zainab Najim Abdul-nabi conducted the research and analysis, Nadheerah F Neamah wrote the manuscript, and Noora Sgheer Ghaleb supervised the project. All authors reviewed and approved the final manuscript.

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