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ORIGINAL ARTICLE

Epidemiological and Clinical Features of the First Cohort of Patients Diagnosed with COVID-19 in Bahrain

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Abstract

Background: This study investigates the clinical characteristics of the first confirmed cases of Coronavirus disease-2019 (COVID-19) in Bahrain.

Methods: This is a retrospective, cross-sectional study including the first 247 confirmed cases in Bahrain. Demographic, clinical, and laboratory data were extracted from electronic medical records.

Results: Mean Standard Deviation (SD) age of patients was 44.15 (16.5) years. More males were affected by the disease (61%; 151/274). Mean (SD) of the duration between confirmation and discharge was 9.8 (5.1) days. Of 247 patients, 4 deaths were reported (1.6%); 17.5% (24/137) showed a temperature of >37- on admission, with 4% (6/148) yielding an oxygen saturation of 94% or less. Leukopenia was reported in 36.8% of patients (63/171). One quarter of patients (25.5%) received oseltamivir, 24.7% received hydroxychloroquine sulfate (24.7%), and 1.2% received steroids.

Conclusion: In this study, the authors have captured the epidemiological and clinical profiles of the first cases of COVID-19 pertaining to the first wave of the pandemic in Bahrain. The early strict measures may have contributed to the lower incidence as well as lower morbidity and mortality of COVID-19 infection in Bahrain. Major gaps in our knowledge of the clinical spectrum of COVID-19 and its prognosis, outcomes, and associated risk factors indicate the need for further research.

Keywords: Bahrain, COVID-19, SARS-CoV-2, Pandemics, Coronavirus

Introduction

Coronaviruses (CoVs) comprise a large family of

cold to more severe diseases, such as Middle East Respiratory Syndrome and Severe acute respiratory zoonotic, allowing transmission between animals and people.[1] Human coronaviruses were first identified in the mid-1960s. The name "coronavirus" comes from the crown-like projections on their surfaces, as "corona" is Latin for "crown."[2]

In December 2019, a series of pneumonia cases of unknown cause was reported in Wuhan, China. The evidence was highly suggestive of an association with exposure to the Huanan seafood market in Wuhan. Chinese authorities identified a novel coronavirus, which was isolated on January 7, 2020. Genetic sequencing helped to develop specific diagnostic kits.[3] The virus is named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), and the disease it causes is known as Coronavirus disease-2019 (COVID-19). The COVID-19 outbreak was identified as a pandemic by the World health organization (WHO) on March 11, 2020. This is the first pandemic known to be caused by the emergence of a new coronavirus.[4]

At the time of writing this report, more than 221,561,507 cases of COVID-19 have been reported globally.[4] In Bahrain, as of September 6th, 2021, the Ministry of Health has reported a total of 273,682 confirmed COVID-19 cases. Among these cases, there have been more than 1,388 deaths, equaling approximately 0.5% of the confirmed cases. The first case of COVID-19 was confirmed on February 24, 2020, in a Bahraini male who had recently returned from Iran. Although the individual was asymptomatic upon landing in Bahrain, he later developed symptoms and tested positive for the virus. The first community transmission case was confirmed on March 9, 2020, in a resident doctor who was in contact with her mother, who had also returned from Iran. Shortly thereafter, on March 16, 2020, the first COVID-19-related death was announced, in a 65-year-old female.[5]

Published data and early research on the outbreak in China showed that the disease ranged from very mild (including no symptoms) to severe (resulting in acute respiratory distress syndrome and death). Most infected patients were male, and the most common symptoms at onset of illness were fever, cough, and myalgia or fatigue.[1-3] In one study, hospital admission was required for 32% of patients, and 16% died.[1] The mortality rate for hospitalized patients with 2019 novel coronavirus-infected pneumonia was 4.3%.[2] In adult inpatients with COVID-19 in Wuhan, mortality was associated with older age, higher Sequential organ failure assessment (SOFA) score, and d-dimer level greater than 1 µg/L on admission.[4]

Following the COVID-19 outbreak in China and the reporting of the first few cases outside China, an epidemiological alert was issued and a national committee to confront COVID-19 was formed.

The objective of the present study is to describe the epidemiological features, clinical presentation, treatment, and outcomes of the first 247 confirmed COVID-19 cases in Bahrain. This will provide a comprehensive understanding of the unique features of COVID-19 and influence the preventive measures. It will contribute to the global data base regarding the unique characteristics of this novel coronavirus along with its clinical features, significant correlations, and associations.

Methods

This retrospective, cross-sectional descriptive study utilized records from February 23 to March 23, 2020, to describe the epidemiological characteristics of the first 247 diagnosed cases of COVID-19 in Bahrain.

For this study, a confirmed COVID-19 case was defined as per the national case definition—a positive result from a molecular testing method.[5] The assay followed the WHO-approved protocol and measured the viral E gene. If the E gene was detected, the sample was subsequently analyzed for the SARS-CoV-2 RNA dependent RNA polymerase (RdRP) and N genes. When measuring the initial E gene, a cycle threshold (Ct) value of >38 was considered negative.[5]

Patient data was extracted from electronic medical records. First, all study patients' demographic, clinical, and laboratory data were retrieved electronically from the Health Information Directorate of the Ministry of Health. Second, a group of medical residents explored any additional information pertaining to the same patients through a thorough examination of the medical records. All data were subsequently anonymized, coded, and stored in an encrypted document. In addition, all data was independently checked by the principal investigator. Data extracted from electronic medical records included demographic information (age, nationality, gender); clinical information (duration of admission, status [recovered or deceased], vital signs on admission [temperature, arterial blood oxygen saturation on room air, heart rate, respiratory rate, systolic blood pressure (sitting and lying), diastolic blood pressure (sitting and lying)], underlying comorbidities, and medication administered); and laboratory information (complete blood count, liver function, renal function, urea, electrolytes, c-reactive protein [CRP], erythrocyte sedimentation rate [ESR], d-dimer level, coagulation profile, fasting and random glucose, thyroid function, uric acid, and amylase).

This study was approved by the National COVID-19 Research and Ethics Committee and the ethics committee of the Royal College of Surgeons in Ireland–Medical University of Bahrain. The requirement for informed consent was waived by the ethics committee due to the evolving nature of the pandemic.

Statistical analysis

Continuous variables are described as means standard deviations (SDs) and ranges. Categorical variables are expressed as frequencies and percentages. The association between types of treatment received and sociodemographic variables (age and sex) was tested using the Chi-square test or Fisher's test, as applicable. Data analysis was carried out using Statistical Package for Social Sciences (SPSS) software, version 26.

Results

Demographic and clinical characteristics

The patients' sociodemographic data is presented in Table 1. The mean (SD) age of patients was 44.15 (16.48) years. Patient ages ranged from 3 months to 79 years. The highest proportion of cases (24.3%) was recorded in the age group of 51–60 years. More males (61%; 151/274) than females were affected by the disease, and most patients (88%; 217/274) were Bahrainis. Approximately 78.8% (216/274) of patients arrived on flights from Iran. The mean (SD) time duration between start of symptoms and discharge was 9.76 (5.14) days. Out of 247 cases, 4 deaths were reported (1.6%). Local cases with no history of travel in the 14 days prior to onset of the first symptom constituted 10.2% of the total cases. The following comorbidities were reported: hypertension (14.2%,), diabetes mellitus (13.4%), and hyperlipidemia (11.7%). The mean (SD) temperature was 36.88 (0.37) °C, with 17.5% showing temperatures of >37 °C on admission. The mean (SD) oxygen saturation was 97.88 (2.04) %, with 4% of patients yielding a saturation of £94% (Supplementary table 1).

Table 1: Demographic and clinical characteristics of all patients (N=247)

Characteristic	All patients N (%)
Age Mean (SD*)	44.15 (16.48)
Age category (years)	
0-10	5 (2.0)
11-20	12 (4.9)
21-30	47 (19.0)
31-40	34 (13.8)
41-50	48 (19.4)
51-60	60 (24.3)
61-70	32 (13.0)
71-80	9 (3.6)
Sex	
Female	96 (38.9)
Male	151 (61.1)
Nationality	
Bahraini	217 (87.9)
GCC** Arab	9 (3.6)
Non-GCC Arab	8 (3.2)
Europe	5 (2.0)
Other nationality	8 (3.2)
Days of admission (n=201) Mean (SD)	9.76 ± 5.14
Status	
Recovered	243 (98.4)
Deceased	4 (1.6)
Comorbidities (n=121)	
Hypertension	35 (14.2)
Diabetes Mellitus	33 (13.4)
Dyslipidaemia	29 (11.7)
Glucose-6-phosphate dehydrogenase deficiency (Qualitative)	24 (9.7)

**SD: Standard deviation;*

Laboratory findings on admission

Leukocyte counts were within the normal range (4–10 × 10^9/L) for 102/171 (59.6%) patients, and leukopenia was reported in 63/171 (36.8%). Only 6/171 (3.5%) had leukocytosis (Table 2). Approximately one third (32.5%; 53/163) showed a lymphocytic differentiation percentage of more than 44%, while only 18% had lymphocytopenia. C-reactive protein was elevated in 51/131 (38.9%) patients, and ESR was increased in 33/76 (43.4%). D-dimer tests were conducted for 8 patients, 5 of whom had elevated results (>0.5 mg/L).

Table 2: Laboratory findings on admission

Parameter	Mean (SD)
Fasting Blood Sugar, mmol/L (n=21)	8.40 (3.77)
Random Glucose, mmol/L (n=36)	12.58 (18.51)
Total protein, g/L (n=158)	70.70 (6.80)
Albumin, g/L (n=158)	44.15 (4.46)
Globulin, g/L (n=158)	27.30 (6.60)
Alanine Aminotransferase, U/L (n=151)	25.86 (15.96)
Alkaline Phosphatase, U/L (n=153)	76.46 (47.64)
Gamma-Glutamyl aminotransferase, U/L(n=68)	39.93 (33.95)
Total Cholesterol, mmol/L (n=21)	4.86 (2.47)
Total bilirubin, g/L (n=155)	10.86 (5.74)
Urea, mmol/L (n=173)	6.84 (11.35)
Creatinine, mmol/L (n=170)	64.98 (32.88)
Haematocrit % (n=171)	41.83 (7.26)
Haemoglobin, g/dl (n=172)	14.02 (4.32)
White Blood Cell Count, x10^9/L (n=171)	5.00 (2.27)
<4 x10^9/L; n (%)	63/171 (36.8%)
4-10 x10^9/L; n (%)	102/171 (59.6%)
>10 x10^9/L; n (%)	6/171 (3.5%)
Lymphocytes % (n=163)	37.36 (15.57)
£ 44%; n (%)	110/163(67.5%)
> 44%; n (%)	53/163(32.5%)
Lymphocyte absolute count x10^9/L (n=170)	2.38 (4.14)
< 1 x10^9/L; n (%)	31/170 (18.2%)
≥ 1 x10^9/L; n (%)	139/170 (81.8%)
Mean cell haemoglobin, fl (n=173)	25.96 (3.59)
Mean cell haemoglobin concentration, fl (n=172)	32.74 (8.98)
Mean cell volume, fl (n=172)	80.06 (16.39)
Monocytes % (n=172)	7.36 (2.85)
Monocyte absolute count (n=172)	2.37 (10.82)
Neutrophils % (n=172)	49.36 (17.04)
Neutrophils absolute count (n=172)	10.65 (42.97)
Platelets x10^9/L (n=166)	239.22 (71.90)
International Normalized Ratio (n=59)	0.96 (0.08)
Thyroid stimulating hormone, mIU/L (24)	37.77 (96.10)
Uric acid, mmol/L (n=39)	257.92 (134.44)
C-Reactive Protein, mg/L (143)	14.59 (31.06)
≤5 mg/L; n (%)	80/131(61.1%)
>5 mg/L; n (%)	51/131(38.9%)
Sodium, mmol/L (n=171)	134.36 (24.94)
Potassium, mmol/L (n=169)	8.07 (18.66)
Chloride, mmol/L (n=170)	100.98 (15.05)
Bicarbonate, mmol/L (n=153)	26.42 (5.64)
Calcium, mmol/L (n=143)	2.27 (0.14)
Prothrombin Time, s (n=61)	11.31 (0.93)
Thrombin Time, s (n=49)	19.22 (13.23)
Activated Partial Thromboplastin Time, s (n=62)	22.42 (2.95)
APTT* Ratio, s (n=62)	0.80 (0.10)
Fibrinogen, mg/dl (n=51)	399.43 (175.91)
D-dimer µg/ml (n=8)	14.42 (27.57)
Erythrocyte Sedimentation Rate, mm/hour (n=76)	26.13 (25.98)
≤ 20 mm/hour; n (%)	43/76 (56.6%)
>20 mm/hour; n (%)	33/76 (43.4%)

* APTT: Activated partial thromboplastin time

Treatment

Approximately one third of patients received antiviral treatment (31.6%) and/or hydroxychloroquine sulfate (30.8%). The antiviral agents used were lopinavir, ribavirin, and oseltamivir. Approximately 17.4% received an antibiotic, and 1.2% received steroids.

The associations between two types of treatment (antiviral and hydroxychloroquine) and sociodemographic variables (age and gender) were tested using the Chi-square test or Fisher's test, as applicable (Table 3). Age showed significant correlation with the antiviral and hydroxychloroquine treatment options. These treatment options were mostly used in patients aged 41–50 and 51–60 years.

Table 3: Association between type of treatment received and sociodemographic variables

Variable	Antiviral treatment		P-value	Hydroxychloroquine		P-value
Sex	Yes, n (%)	No, n (%)		Yes, n (%)	No, n (%)	
Male	32 (33.3)	64 (66.7)	0.369	33 (34.4)	63 (65.5)	0.201
Female	46 (30.5)	105 (69.5)		43 (28.5)	108 (71.5)	
Age (years)						
0-10	0 (0.0)	5 (100)		0 (0.0)	5 (100)	
11-20	0 (0.0)	12 (100)		0 (0.0)	12 (100)	
21-30	2 (4.3)	45 (95.7)		2 (4.3)	45 (95.7)	
31-40	0 (0.0)	34 (100)	<0.001	0 (0.0)	34 (100)	<0.001
41-50	12 (25.0)	36 (75.0)		12 (25.0)	36 (75.0)	
51-60	35 (58.3)	25 (41.7)		34 (56.7)	26 (43.3)	
61-70	25 (78.1)	7 (21.9)		24 (75.0)	8 (25.0)	
71-80	4 (44.4)	5 (55.6)		4 (44.4)	5 (55.6)	

Ages of the deceased patients were 71, 65, 65, and 59 years. All deceased patients showed high inflammatory markers, specifically erythrocyte sedimentation rate (ESR) and C-reactive protein (CRP), and one deceased patient had a high d-dimer level as well. Oxygen saturation was low in one deceased patient; the same patient had lymphocytopenia.

Discussion

This study describes the clinical and epidemiological features and laboratory findings of the first 247 patients diagnosed with COVID-19 in Bahrain. Men were more commonly affected than women, and the highest number of cases was recorded in patients in their sixth decade of life. Only 4 deaths were reported among the study population during the study period.

The mean age of the patients in this study was comparable to those reported in the United Arab of Emirates (UAE) and Jordan but lower than those reported in Saudi Arabia and Oman.[6-9] Early in the pandemic, COVID-19 incidence was highest among older adults; however, a shift is emerging in the demographic of COVID-19 cases toward individuals aged younger than 40 years, possibly resulting from increased socialization in younger age groups and reversion to previous routines.[10,11] The fact that most of the patients in this study shared a common source of exposure i.e., travel to Iran may have confounded the age and sex distribution of the study population.

There are inconsistent reports regarding gender distribution across COVID-19 studies in the Middle East. While some studies reported male-dominated prevalence, others reported female predominance.[6-9] The same variability was reported in the first few studies from China.[1-4,12] Some studies reported that gender predisposition may have been associated with the higher smoking rates in men than in women; however, the current literature does not support smoking as a predisposing factor in men for infection with SARS-CoV-2.[13] While men and women have the same susceptibility to SARS-CoV-2, men may be more prone to higher severity and mortality.[14]

Most patients in the present study were afebrile on admission, with oxygen saturation levels >95%. This supports most of the published literature, which suggests that several patients with COVID-19 are asymptomatic or have only mild symptoms.[15]

The majority of the first positive cases shared a common source of exposure (travel to Iran). With the constant travel to Qom which was the city of Iran's first reported cases of COVID-19 and its related deaths, Iran emerged as the second focal

Iran was the first country in the Middle East where the virus was detected, it is possible that it played a key role in the dissemination of the disease in neighbouring countries, such as Iraq, Pakistan, and Afghanistan, Bahrain, Kuwait, Oman, Lebanon, and the United Arab Emirates and even one in Canada.[16] Since then, Bahrain's "International COVID-19 Repatriation Programme" (ICRP) has operated under vigorous containment protocols. ICRP-repatriated individuals were admitted to a specialized repatriation containment facility and then formally admitted to the country following a quarantine period and after testing negative for COVID-19.[17] The first phase of the ICRP included the repatriation of 165 individuals from Iran, 77 of whom had tested positive for COVID-19.

The COVID-19 pandemic has been a rapidly evolving situation with no confirmed or approved definitive treatment.[18] Therefore, management guidelines have been updated constantly. In this study, antivirals (specifically oseltamivir) and hydroxychloroquine constituted over 60% of the treatments used for confirmed cases of COVID-19 in the initial stages of the pandemic. Later in the pandemic, convalescent plasma (CP) transfusion was added to the protocol in Bahrain as a potentially promising treatment for severe cases.[19] However, in the absence of highly powered randomized controlled trials, the efficacy of CP remains controversial.[20] In this study, no patients received CP treatment. In fact, some of them may have volunteered later during the pandemic to donate their plasma for treatment purposes.

Age showed a significant correlation with treatment type. Specifically, antivirals and hydroxychloroquine were mostly used in patients aged 41–50 and 51–60 years, which is consistent with the high disease prevalence in these two age cohorts.

The mortality rate in this study (1.6%) was comparable to that in Jordan but lower than those reported in Kingdom of Saudi Arabia (KSA) and UAE.[7, 21, 22] Furthermore, our mortality rate was lower than those reported in China in studies conducted on the first cohort of confirmed cases of COVID-19.[2,4]

After the early reports of the first COVID-19 cases, the Bahraini government promptly applied a series of regulations and protocols recommended by the WHO and public health experts.[23] Upon observing the early signs of the local outbreak, additional regulations were put in place to prevent further spread of infection. However, Bahrain did not reach the stage of curfew at any point in time. These strict, early measures may have contributed to the lower incidence and lower morbidity and mortality of COVID-19 in Bahrain.[21]

Limitations and strengths

This study has several limitations. These include incomplete medical records and the absence of a standardized clinical and laboratory checklist (which may have been developed later). This contributed significantly to missing and inconsistent data. In particular, the authors were unable to report symptoms and clinical presentation because most cases had incomplete documentation of clinical symptoms or were missing laboratory testing (or both). Hence, many indicators of poor prognosis, such as the sequential organ failure assessment score (SOFA scores), could not be calculated. Documentation of the outcomes and complications was incomplete; therefore, we were unable to establish risk factors for mortality or poor outcomes. Furthermore, the medical records of deceased patients were inaccessible; thus, we were unable to report outcomes or complications or their associations with other variables. Missing data may pose implications on results accuracy and generalizability.

This study also has several strengths. Namely, it included the first 247 diagnosed cases in Bahrain, which has contributed to our understanding of the epidemiological features of the disease at an early stage. All patients were admitted and quarantined in dedicated, especially designed facilities, which allowed uniformity of electronic medical records. The early diagnosed cases were managed and followed up by a central national team; hence, the data represents the entire population of Bahrain and is not a single-center experience.

Declaration of interest statement

Authors declare no conflict of interests.

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None.

Authors' contributions

All authors made substantial contributions to conception and design, acquisition of data, or analysis and interpretation of data; took part in drafting the article or revising it critically for important intellectual content; agreed to submit to the current journal; gave final approval of the version to be published; and agreed to be accountable for all aspects of the work.

Data availability statement

Data will be available on legitimate requests.

References

1. Huang C, Wang Y, Li X, Ren L, Zhao J, Hu Y, *et al*. Clinical features of patients infected with 2019 novel coronavirus in Wuhan, China. *Lancet*. 2020;395(10223):497-506.

2. Wang D, Hu B, Hu C, *et al*. Clinical Characteristics of 138 Hospitalized Patients With 2019 Novel Coronavirus–Infected Pneumonia in Wuhan, China. *JAMA*. 2020;323(11):1061–1069. doi:10.1001/jama.2020.1585

3. Chen N, Zhou M, Dong X, Qu J, Gong F, Han Y, *et al*. Epidemiological and clinical characteristics of 99 cases of 2019 novel coronavirus pneumonia in Wuhan, China: a descriptive study. *The Lancet*. 2020;395(10223):507-13.

4. Zhou F, Yu T, Du R, Fan G, Liu Y, Liu Z, *et al*. H, Cao B. Clinical course and risk factors for mortality of adult inpatients with COVID-19 in Wuhan, China: a retrospective cohort study. *Lancet*. 2020 Mar 28;395(10229):1054-1062. doi: 10.1016/S0140-6736(20)30566-3.

5. Victor Corman TB, Sebastian Brünink, Christian Drosten, *et al*. Diagnostic detection of 2019-nCoV by real-time RT-PCR 2020 [Available from: : https://www.who.int/docs/default-source/coronaviruse/protocol-v2-1.pdf. Accessed 2nd Oct 2021.

6. Naeem K, Choondal V, Hamouri M, Abbas A, Machingal S, Fahad F, *et al*. 2020. Clinical Characteristics and Outcomes of First 100 Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-Cov-2) Patients: A Single Center Experience. *European Journal of Medical and Health Sciences*. 2, 3 (May 2020). DOI:https://doi.org/10.24018/ejmed.2020.2.3.277.

7. Samrah SM, Al-Mistarehi AW, Ibnian AM, *et al*. COVID-19 outbreak in Jordan: Epidemiological features, clinical characteristics, and laboratory findings. *Annals of Medicine and Surgery*. 2020;57:103-108. DOI: 10.1016/j.amsu.

8. Alsofayan YM, Althunayyan SM, Khan AA, Hakawi AM, Assiri AM. Clinical characteristics of COVID-19 in Saudi Arabia: A national retrospective study. *Journal of Infection and Public Health*. 2020;13(7):920-5.

9. Khamis F, Al-Zakwani I, Al Naamani H, Al Lawati S, Pandak N, Omar MB, *et al*. Clinical characteristics and outcomes of the first 63 adult patients hospitalized with COVID-19: An experience from Oman. *Journal of infection and public health*. 2020;13(7):906-13.

10. Boehmer TK DJ, Caruso E, *et al*. Changing Age Distribution of the COVID-19 Pandemic — United States, May–August 2020. *MMWR Morb Mortal Wkly Rep*. 2020;69:1404–9.

11. Venkatesan P. The changing demographics of COVID-19. *Lancet Respir Med*. 2020 Dec;8(12):e95. doi: 10.1016/S2213-2600(20)30461-6.

12. Wang Y, Wang Y, Chen Y, Qin Q. Unique epidemiological and clinical features of the emerging 2019 novel coronavirus pneumonia (COVID-19) implicate special control measures. *J Med Virol*. 2020 Jun;92(6):568-576. doi: 10.1002/jmv.25748.

13. Cai H. Sex difference and smoking predisposition in patients with COVID-19. *Lancet Respir Med*. 2020 Apr;8(4):e20. doi: 10.1016/S2213-2600(20)30117-X.

14. Jin JM, Bai P, He W, Wu F, Liu XF, Han DM, *et al*. Gender Differences in Patients With COVID-19: Focus on Severity and Mortality. *Front Public Health*. 2020 Apr 29;8:152. doi: 10.3389/fpubh.2020.00152.

15. Gao Z, Xu Y, Sun C, Wang X, Guo Y, Qiu S,

Ma K. A systematic review of asymptomatic infections with COVID-19. *J Microbiol Immunol Infect*. 2021;54(1):12-16. doi: 10.1016/j.jmii.2020.05.001.

16. Arab-Mazar Z, Sah R, Rabaan AA, Dhama K, Rodriguez-Morales AJ. Mapping the incidence of the COVID-19 hotspot in Iran - Implications for Travellers. Travel Med Infect Dis. 2020 Mar-Apr;34:101630. doi: 10.1016/j.tmaid.2020.101630. Epub 2020 Mar 14. PMID: 32184130; PMCID: PMC7118655.

17. International Covid-19 Repatriation Programme (ICRP) initiated by Government of Bahrain [press release]. Bahrain, 11 March 2020. Accessed Oct 2nd 2020. Available at: https://healthalert.gov.bh/en/article/News-123666

18. Lam S, Lombardi A, Ouanounou A. COVID-19: A review of the proposed pharmacological treatments. *Eur J Pharmacol*. 2020 Nov 5;886:173451. doi: 10.1016/j.ejphar.2020.173451.

19. Wooding DJ, Bach H. Treatment of COVID-19 with convalescent plasma: lessons from past coronavirus outbreaks. *Clin Microbiol Infect*. 2020 ;26(10):1436-1446. doi: 10.1016/j.cmi.2020.08.005.

20. Duan K, Liu B, Li C, *et al*. Effectiveness of convalescent plasma therapy in severe COVID-19 patients. *Proc Natl Acad Sci U S A*. 2020 Apr 28;117(17):9490-9496. doi: 10.1073/pnas.2004168117.

21. Thamir A. Alandijany, Arwa A. Faizo, Esam I. Azhar. Coronavirus disease of 2019 (COVID-19) in the Gulf Cooperation Council (GCC) countries: Current status and management practices, *Journal of Infection and Public Health*. 2020; 13(6):839-842. https://doi.org/10.1016/j.jiph.2020.05.020.

22. Shabrawishi M, Al-Gethamy MM, Naser AY, Ghazawi MA, Alsharif GF, Obaid EF, *et al*. Clinical, radiological and therapeutic characteristics of patients with COVID-19 in Saudi Arabia. PLoS One. 2020 Aug 6;15(8):e0237130. doi: 10.1371/journal.pone.0237130.

23. World Health Organization: Bahrain should be commended on its efforts to contain COVID 19 and has set a good example to other countries [press release]. 2020. Accessed at Sept 15th 2020. Available at: https://healthalert.gov.bh/en/article/News-136419.

Supplementary files

Supplementary Table 1: Vital signs on admission

Vital sign	Mean (SD)
Temperature (°C) (n=137)	36.88 (0.37)
£ 37 (°C); n (%)	113/137 (82.5%)
> 37 (°C); n (%)	24/137 (17.5%)
SaO2% RA (n=148)	97.88 (2.04)
£ 94%; n (%)	6/148 (4.1%)
> 94%; n (%)	142/148 (95.9%)
Heart rate beats/minute (n=147)	85.41(14.09)
SBP (lying) mmHg (n=149)	129.51(17.14)
DBP (lying) mmHg (n=149)	74.34 (10.19)

SaO2: Saturated Oxygen, SBP: Systolic blood pressure, DBP: Diastolic blood pressure