

## Clinical Characteristics and main presentation of the COVID19 among Iraqi people

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### ABSTRACT

The COVID19 pandemic is a newly emerging infectious disease that needs to be understood thoroughly in order to be controlled. This study aimed to study the clinical and laboratory characteristics of the COVID19 patient.

Patient and methods: A cross-sectional study was done in Iraq, at Salahadeen general hospital from the period 1st March to the end of May 2020 on patients diagnosed with COVID 19. A total of 75 COVID19 patients enrolled in the study. a full history was taken, a full physical examination was done, computerized tomography, and laboratory tests.

Results: The age distribution of the COVID19 patient were commonly aged (30-50 years) 37(49.3%), and those aged <30 years represented about 6(8%) of the sample. The dominant gender was male 43(57.3%). About 58 (77.3%) of the patient had comorbid disease, coronary vascular disease was 49(65.3%), hypertension was found among 47(62.7%), DM was found among 40(53.3%). Smoking found among 35(46.7%) of the patients.

The commonest symptoms were dyspnea 63(84%), fever 51(68%), Myalgia 46(61.3%), loss of smell 8(10.7%), vomiting 8(10.7%), sputum 8(10.7%), loss of taste 6(8%), diarrhea 6(8%), dry mouth found among 6(8%), cough 6(8%), fatigue 5(6.7%) followed by arthralgia 4(5.3%), and chest pain 3(4%). The mean Spo<sub>2</sub> was (88±6.6), heart rate was (103±23.3), the mean respiratory rate was (17.7±4.1), the mean temperature value was (38.1±1.1), and the mean C - reactive protein rate was (49.8±41.2). The CBC shows that Lymphopenia was reported among 34(45.3%) of the patient, leukocytosis reported among 19 (25.3%) of the patient. Chest CT revealed that mean lung involvement was (16.6±14.7%).

Conclusion: The commonest presentation of the patient was dyspnea, followed by fever. Digestive symptoms and myalgia were common. COVID19 maybe became a stigma in our community and educational programs were needed to overcome this problem.

**Keywords:** COVID19 infection, clinical presentation, CT, Iraq.

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## الخصائص السريرية والاعراض الرئيسية الخاصة بعدوى كورونا بين المرضى

### العراقيين

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### الملخص

إن جائحة كورونا تعتبر مرض معدى ناشئ جديد يحتاج إلى فهم دقيق من أجل السيطرة عليه. هدفت هذه الدراسة إلى دراسة الخصائص السريرية والمخبرية لمرضى كورونا في العراق. المريض والأساليب: دراسة مقطعية أجريت في العراق، في مستشفى صلاح الدين العام من الفترة 1 مارس حتى نهاية مايو 2020 على مرضى تم تشخيص اصابتهم بعدوى كورونا. تم دراسته عينه مقدارها 75 مريضاً مصاباً بعدوى كورونا في الدراسة. تم اخذ التاريخ المرضي الكامل للمرضى، وتم إجراء الفحص البدني الكامل، والتصوير المقطعي (المفراس)، والاختبارات المعملية. النتائج: كان التوزيع العمري للمرضى اعلى في اللذين اعمارهم (30-50 سنة) 37 (49.3%)، وأولئك الذين تقل أعمارهم عن 30 عامًا كانوا يمثلون حوالي 6 (8%) من العينة. وكان الجنس المهيمن هو الذكور 43 (57.3%). حوالي 58 (77.3%) من المرضى مصابون بأمراض مرضية مشتركة، أمراض الأوعية التاجية 49 (65.3%)، ارتفاع ضغط الدم 47 (62.7%)، داء السكري بين 40 (53.3%). ووجد التدخين بين 35 (46.7%) من المرضى.

كانت الأعراض الأكثر شيوعًا هي ضيق التنفس 63 (84%) ، الحمى 51 (68%) ، ألم عضلي 46 (61.3%) ، فقدان الشم 8 (10.7%) ، القيء 8 (10.7%) ، البلغم 8 (10.7%) ، فقدان الشهية. التنوق 6 (8%) ، الإسهال 6 (8%) ، جفاف الفم بين 6 (8%) ، السعال 6 (8%) ، التعب 5 (6.7%) يليه ألم المفاصل 4 (5.3%) ، وألم الصدر 3 (4%). كان متوسط Spo2 % (88 ± 6.6) ، وكان معدل ضربات القلب (103 ± 23.3) ، وكان متوسط معدل التنفس (17.7 ± 4.1) ، وكان متوسط قيمة درجة الحرارة (38.1 ± 1.1) ، ومتوسط معدل البروتين التفاعلي C كان (49.8 ± 41.2). أظهر فحص الدم أن قله الخلايا الليمفاوية وجد بين 34 (45.3%) من المرضى ، وأفادت زيادة عدد الكريات البيضاء بين 19 (25.3%) من المرضى. أظهر التصوير المقطعي للرئة أن متوسط إصابة الرئة كان (16.6 ± 14.7%).

**الكلمات الدالة:** جائحه كورونا ، عرض سريري ، المفراس ، العراق

## 1. Introduction

The causes of a cluster of cases of pneumonia were established as a novel coronavirus in Wuhan, China.[1] The outbreak was quickly spread across China, followed by an explosion of cases in most countries worldwide. As of July 12, 2020 over 12 million confirmed diseases (including more than 0.5 million deaths) have been recorded around the world. The World Health Organization (WHO) identified 2019 (COVID-19) as a pandemic].[2]

COVID-19 has several different characteristics, such as high infectiousness during incubation, the time delay from real exposure to the virus to the symptom appearance, the number of persons will be infected and the effects of different management protocols and preventive measures to be taken to control the disease . [3]

The rang of incubation period was 3-14 days, but some studies reported that the median incubation period 5.1 days, and within 11.5 days 97.5% will be symptomatic. Some people their incubation period may be longer than 14 days (1%). [4]

The majority of COVID-19 patients presented with fever, cough and dyspnea, [5,6]but also in few reports there was reporting of digestive symptoms as presenting signs and symptoms in some patients[7,8].

It's important to understand the clinical history of the disease in any community in order to control its spread and identify the patient as early as possible. As the researcher knowledge little was reported about clinical presentation of COVID19 patients in Iraq. This

study aimed at identification of the clinical presentation and laboratory findings of Iraqi patient with COVID19.

## 2. Patients & Methods

This cross sectional study done in Salahadeen governorate in Iraq, at Salahadeen general hospital from the period 1st March to end of May 2020 on patient diagnosed with COVID 19. A total of 75 patient infected with COVID19 was enrolled in the study. All patient were confirmed as COVID 19 patient by nasal swab, full history was taken from them. Full physical examination was done, computerized tomography, and laboratory tests e.g. blood count CRP and SPO2% were measured. Ethical approval was taken from the research committee of Salahadeen directorate, as well as verbal approval from the patient was taken.

Data was analyzed using SPSS version 23 for data entry and analysis. P value < 0.05 was considered as significant.

## 3. Results

The age distribution of the COVID19 patient were commonly aged (30-50 years) 37(49.3%), followed by those age > 50 years 32(42.7%), and those aged <30 years represented about 6(8%) of the sample. The dominant age was male 43(57.3%), followed by female 32(42.7%). About 58(77.3%) of the patient had comorbid disease, coronary vascular disease was 49(65.3%), hypertension was found among 47(62.7%), DM was found among 40(53.3%). Smoking found among 35(46.7%) of the patients, as shown in Table 1.

Table 1. The general characteristics and comorbidity among COVID 19 patients.

	Frequency	Percent
Age		
<30 years	6	8
30-50 years	37	49.3
>50 years	32	42.7
Gender		
Male	43	57.3
Female	32	42.7
comorbidity	58	77.3
CVD	49	65.3
Hypertension	47	62.7
DM	40	53.3
Smoking	35	46.7

The commonest symptoms were dyspnea 63(84%), fever 51(68%), Myalgia 46(61.3%), loss of smell 8(10.7%), vomiting 8(10.7%), sputum 8(10.7%), loss of taste 6(8%), diarrhea 6(8%), dry mouth found among 6(8%), cough 6(8%), fatigue 5(6.7%) followed by arthralgia 4(5.3%), and chest pain 3(4%), as shown in table 2.

Table 2. The main symptoms presented among patients

	Frequency	Percent
Dyspnea	63	84
Fever	51	68
Myalgia	46	61.3
Loss of smell	8	10.7
vomiting	8	10.7
Sputum	8	10.7
Loss of Taste	6	8
diarrhea	6	8
dry mouth	6	8
Cough	6	8
Fatigue	5	6.7
Arthralgia	4	5.3
Chest pain	3	4

The mean Spo<sub>2</sub>% was (88±6.6), heart rate was (103±23.3), the mean respiratory rate was (17.7±4.1), the mean temperature value was (38.1±1.1), and the mean C - reactive protein rate was (49.8±41.2). The CBC show that Lymphopenia was reported among 34(45.3%) of the patient, leukocytosis reported among 19(25.3%) of the patient. Chest CT revealed that mean lung involvement was (16.6±14.7 %), as shown in table 3.

Table 3. The commonest signs, laboratory, and radiological findings of the patients..

Main laboratory and radiological features	Minimum	Maximum	Mean	Std. Deviation
SPO <sub>2</sub> % sitting position	70	97	88.0	6.6
Heart rate	61	140	103.2	23.3
Temperature	36.2	40	38.1	1.1
Respiratory rate	11	29	17.7	4.1
CRP	13	170	49.8	41.2
CBC				
Normal	22	29.3		
Lymphopenia	34	45.3		
Leukocytosis	19	25.3		
Chest CT results	0	60	16.6	14.7

#### 4. Discussion

The age distribution of the COVID19 patient were commonly aged (30-50 years) (49.3%), and those aged <30 years represented about (8%) of the sample. This figure goes with what reported in Basra south of Iraq by Habib OS et al [9] found that commonly affected age was 30-50 years (42%), and found that those aged < 30 years was (18%). Venkatesan P [10] reported that there were warning signs of changing in COVID19 demography as the infection percentage was increased among those aged less than 40 years and percentages of the infected persons those aged 15-24 years increased from 5.4 to 15% .

Excess statistics among younger people have repercussions for the transmission and contamination of population groups that are more vulnerable. In Iraq the families were big consist of parents and grandparents with many children and increased crowding index, all these increased the possibility of infection of the younger age group. Another point is that those aged 30-50 years usually the dependable persons in family and responsible for the shopping and social activities increasing their possibility of exposure to infection.

Males (57.3%) were more affected than females (42.7%). , this goes with Habib OS et al [9] found that (50.7%) of COVID 19 patients were male and (49.3%) were females. Pan L et al [8] found male (52.6%) were more than female (47.4%), and Zheng Y, et al [11] found the same think (54.8%), (45.2%) respectively.

About 58(77.3%) of the patient had comorbid disease. Cardio vascular disease was 49(65.3%), hypertension was found among 47(62.7%),and DM was found among 40(53.3%). this was higher than what Zheng Y, et al [11] about (23%) of the sample had comorbid disease, and the commonest comorbid disease among COVID 19 patients were cardiovascular disease (16.4%) , and endocrine disease was (5.5%) . Pan L et al [8] also found the commonest comorbid disease was cardiovascular disease (21.6%). Both previous studies found the commonest co morbid disease was cardiovascular, even though their percentages was lower than what reported in this study.

The prevalent clinical presentation was dyspnea (84%) followed by fever (61.3%)this was differ from what reported by Wan S et al [12] that fever is most prevalent presentation (80%), followed by cough (53%). Yang J et al [13] (86%), cough (670, and dyspnea (30%), This difference is related may be too difference in the patient deal with the disease and the health system that differ from other countries. in Iraq usually patient no seek treatment until they

became seriously ill therefore the dyspnea is worrying symptom for them, and they neglect the fever at this stage, or the presentation is differ in our communities. Another important point is COVID 19 in cultures like in Iraq became a stigma and patient not accepting the idea of their infection or be rejected by the community due to COVID 19 infection .

In this study (61.3%) of the patient had myalgia, this goes with Yang J et al [13] (51%), Wan S et al [12] found that more than 20% of patients had myalgia. Zheng Y [11] reported myalgia among (2.7%) of the patients.

Presentation with Vomiting was among (10.7%), and diarrhea was (8%) this goes with Wan S et al [12] diarrhea (7%), Zheng Y [11] (7.38%), Yang W et al [14] diarrhea (1.4%). Pan L et al [8] reported that diarrhea (34%), and vomiting among (3.9%), also he that (50.5%) of the patient had digestive symptom. chest pain reported among (4%) of the patients, Zheng Y [11] also reported it but in lower percentage (1.4%). Patients with gastrointestinal symptoms and muscle soreness, associated with other risk factors, should receive medical attention for early disease recognition. Another presentations were, loss of smell 8(10.7%), sputum 8(10.7%), loss of taste 6(8%), cough 6(8%), fatigue 5(6.7%) and arthralgia 4(5.3%) found among the patients

This is critical because if clinicians track only the symptoms of the respiratory system for identifying cases for COVID-19, cases with extra pulmonary symptoms can be missed or had delayed diagnosis until the respiratory symptoms manifested. Therefore those patients didn't receive prompt treatment and preventive measures will be delayed also.

The mean C - reactive protein rate was (49.8±41.2). The Lymphopenia was reported among 34(45.3%) of the patient, this supported by the findings of Wan S et al [12] reported lymphocytopenia among 51%.

Lymphopenia and increased C- reactive protein may be associated with the cytokine storm induced by the invasion of the changes in peripheral white blood cells and immune cells such as lymphocytes as a result of virus invasion [15, 16].

## 5. Conclusions

The commonest presentation of the patient was dyspnea, followed by fever. Digestive symptoms, and myalgia were common, therefore a good attention should be paid to the patient with these symptoms. COVID19 may be became a stigma in our community therefore



health authorities should pay attention for this point and do programs to decrease this effect, on diagnosing and controlling COVID19.

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