

Sociodemographic characteristics of first 70 COVID-19 patients in Teaching Medical City

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Abstract

Background: new corona virus has been isolated in china and is named by world health organization SARS-COV-2 as a cause of corona virus disease 2019 (COVID-19) which progressed to pandemic. The first COVID-19 case was reported in Iraq on 24th of February 2020, which was Iranian student.

Objective: this study was conducted to highlight the demographic characteristics of 1st 70 COVID -19 patients in teaching medical city in Baghdad.

Patients and Methods: this descriptive study involved 1st 70 COVID-19 confirmed cases by RT-PCR and treated in Al-Shafaa center –Teaching medical city during the period from 1st march to 17th April. Data were collected from investigation forms which include demographic data, risk factors, outcome, and type of laboratory sample and their result. The definition of suspected, probable and confirmed case is that explained by world health organization.

Results: the total number of confirmed COVID-19 patient (RT-PCR positive) was found to be 70 out of 537 suspected cases (13%). Case fatality rate was found to be 6% for those who died within more than 24hour. The recovery rate was 53%. Low rate of occurrence was among children below 14 years, females and those with no risk factor. High fatality rate was among those who their ages were more than 60 years, males, those with risk factors and who delayed in seeking medical advice. The recovery rate was better among those less than 60year of age, no risk factor and early seeking for medical advice. Female have high recovery rate and low case fatality rate than male

Conclusions: COVID-19 affect all ages but low occurrence in children less than 14 years of age, affect males more than females. Fatality increased with old age, male gender, presence of chronic disease and delay in seeking medical advice.

Keywords: COVID-19, teaching medical city, Baghdad, demographic.

Introduction

Corona virus disease 2019 is mainly respiratory tract disease caused by new corona virus, that was firstly reported in Wuhan, china in December 2019, which is beta corona virus closely linked to the SARS virus^(1, 2). The virus has been isolated in china on January and named 2019-nCov by World Health Organization⁽³⁾.

Severe acute respiratory syndrome corona virus (SARS – COV-2) causes corona virus disease 2019 (COVID-19) which is an infectious outbreak progressed rapidly to global pandemic⁽⁴⁾.

Although the infectious disease is gradually understand but still the difference in mortality rate between different countries remain obscure Three leading factors are reported to strongly influence the risk of dying from COVID -19 which are; male sex, advanced age (above 60 years) and the presence of comorbidities such diabetes, hypertension, chronic respiratory disease, cancer and cardiovascular disease⁽⁵⁾.

The first confirmed case of COVID-2019 in Iraq was reported on 24th of February 2020, which was of Iranian student travelled to Iraq⁽⁶⁾.

This study was conducted to highlight the demographic characteristics of 1st 70 COVID -19 patients in teaching medical city in Baghdad. and their influence on case fatality and recovery rate.

Patients and method

The study is descriptive study and was conducted from 1st of March 2020 to the 17th of April 2020. All

patients with confirmed corona virus disease -2019 (COVID-19) by RT-PCR and treated in Al-Shafaa center in Medical City in Baghdad were included in the study.

Data collection was conducted from the investigation form suggested by WHO and Iraqi ministry of health which is filled by medical doctor for every suspected case of COVID-19 when nasopharyngeal and oropharyngeal swabs were taken to be sent to the central Public health laboratory for RT-PCR. All patients were followed to report their outcome during the period of the study whether they are recovered, died or remain active. The investigation form include sociodemographic data of patients, clinical features, risk factors, source of infection, prognosis of patient and type of laboratory samples and their results.

Suspected case definition for surveillance by WHO⁽⁷⁾ is:

A patient with acute respiratory illness (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath), and with no other etiology that fully explains the clinical presentation and a history of travel to or residence in a country/area or territory reporting local transmission. Or

b- A patient with any acute respiratory illness and having been in contact with a confirmed or probable COVID-19 case in the last 14 days prior to onset of symptoms. Or

c- A patient with severe acute respiratory infection (fever and at least one sign/symptom of respiratory disease (e.g., cough, shortness of breath) and

requiring hospitalization and with no other etiology that fully explains the clinical presentation.

Results

Table 1 shows that only 70 patients out of 537 suspected cases have positive result for covid-19 by

RT-PCR with a positivity rate of 13%, the case fatality rate was found to be 13%, 7% died within less than 24 hour or reached died and 6% more than 24 hour. The recovery rate was found to be 53%.

Table 1: showing the distribution of COVID-19 cases in Teaching Medical City till 17-4-2020.

Type	Number
Suspected	537
Confirmed	70 (13%)
Active	24 (34%)
Cure	37(53%)
death	9 (5)* (4)**
Case Fatality Rate	13% (7%)* (6%) **
Recovery rate	53%

***Death within 24 hours , ** Death within more than 24hours**

It is reported that the frequency of covid-19 is the lowest among children less than 14 year of age (3%) and it affect all age groups, males affected more than females (71% vs. 29% respectively). The rate in Rusafa side of Baghdad (70%) is higher than karkh side (24%). Most of the patients seek medical advice

within less than 3 days of appearance of clinical features (61%) and about 43% of the patients had risk factors such as diabetes, hypertension, and chronic respiratory, cardiovascular or renal diseases (Table 2).

Table2: Sociodemographic characteristics and risk factors among COVID -19 confirmed patients in Teaching Medical City till 17-4-2020, Baghdad.

character	Number and percentage	
<u>Total</u>	70	
<u>Age</u>		
less than 14 years	3%	2
14-40 years	34%	24
40-60 years	39%	27
More than 60years	17	24%
<u>Gender</u>		
Male	50	71%
female	20	29%
<u>Location</u>		
Rusafa	49	70%
Karkh	17	24%
Karbala	1	1%
Kut	2	3%
Anbar	1	1%
<u>Duration of seeking medical advice from appearance of clinical feature</u>		
Less than three days	43	61%
More than three days	27	39%
<u>Risk factor</u>		
Yes	30	43%
No	40	57%

Table 3 shows that the case fatality rate was lowest among children less than 14 year of age (0%) and the highest among old ages more than 60 years (23.5%). It was more among males than females (16% vs.5% respectively). In addition it was higher in Rusafa than Karkh (16.3% vs.5.9% respectively).

Those who delayed in seeking medical advice have higher case fatality rate than those who earlier seeking medical device (18.5% vs.9.3% respectively). Moreover the death rate among patients who had risk factors was higher (26.7%) than those without risk factors (2.5%).

Table 3: The distribution of the COVID -19 died patients according to case fatality rate by sociodemographic characteristics in Teaching Medical City till 17-4-2020, Baghdad.

character	Number	percent	
<u>Total deaths</u>	9		Total confirmed cases (n=70)
<u>Age</u>			
less than 14 years	0	0%	2
14-40 year	2	8.3%	24
40-60 year	3	11.1%	27
More than 60year	4	23.5%	17
<u>Gender</u>			
female	1	5%	20
male	8	16%	50
<u>Location</u>			
Rusafa	8	16.3%	49
Karkh	1	5.9%	17
Karbala	0	0%	1
Kut	0	0%	2
Anbar	0	0%	1
<u>seeking medical advice</u>			
Less than 3day	4	9.3%	43
above3day	5	18.5%	27
<u>Risk factor</u>			
Yes	8	26.7%	30
No	1	2.5%	40

It was found that the recovery rate was the lowest among elderly patients (more than 60 years of age), those who seek medical advice later (more than

three days), and those with risk factors (47%, 37%, and 43.3%) respectively (Table 4).

Table 4: The distribution of the COVID -19 recovered patients according to recovery rate by sociodemographic characteristics in Teaching Medical City till 17-4-2020, Baghdad.

character	Total confirmed cases (n=70)	Total recovery cases (n=37)
	No.	No. (%)
<u>Age</u>		
less than 14 years	2	%) 1 (50
14-40 year	24	13 (54.2%)
40-60 year	27	15 (55.5%)
More than 60year	17	8 (47%)
<u>Gender</u>		
female	20	13 (65%)
male	50	24 (48%)
<u>Location</u>		
Rusafa	49	22 (44.9%)
Karkh	17	12 (70.6%)
karbala	1	0 (0%)
kut	2	2 (100%)
Anbar	1	1 (100%)
<u>Duration of seeking medical advice</u>		
Less than three days	43	27 (62.8%)
More than three days	27	10 (37%)
<u>Risk factor</u>		
Yes	30	13 (43.3%)
No	40	24 (60%)

Table 5 shows that females have high recovery rate and low case fatality rate than males

Table5 : The distribution of the sample (n=70) according to case fatality rate and recovery rate by Gender

Gender	Total	Died	C.F.R %	Recovered	Recovery rate %
female	20	1	5%	13	65%
male	50	8	16%	24	48%

Discussion

About 13% of all suspected cases (537) was found to be positive for COVID-19 which indicate a good selection of suspected cases to be tested by RT-PCR for COVID-19 according to the criteria of WHO. The recovery rate was found to be 53% which is nearly similar to that reported by Iraqi ministry of health⁽⁸⁾, which increased later to 90% as the health care workers became well experienced.

The total case fatality rate (CFR) was 13%, if excluding those who died within 24 hours (7%), then CFR was 6% which is in agreement with⁽⁸⁾ and⁽⁶⁾, CFR decreased later on to 2% as health care workers became well-trained to deal with such cases and hospital well equipped.

All the age groups have been infected including those younger than 14 year and older than 60 years, and males affected more than females which is in accordance with Alsafayan *et al* in Saudi Arabia⁽⁹⁾. The study reported that low rate of the disease among children less than 14 years which is in consistent with Khan in Pakistan (2020)⁽¹⁰⁾.

A high rate was reported in Rusafa side of Baghdad which might be due to the location of Medical City in Rusafa side of Baghdad. Most of the patients seeking medical advice early during the course of the disease which indicate good awareness of people toward the disease.

The case fatality rate was the lowest among children less than 14 year which is in consistent with Khan in Pakistan (2020)⁽¹⁰⁾, but it was higher in those with risk factor and old people more than 60 years age which is in agreement with findings from other countries as co-morbid conditions increase with age⁽⁸⁾. In addition, the case fatality rate was higher among males than females which is in agreement with⁽¹⁰⁾ which need further analytic study to discover the relationship between gender and COVID-19 mortality.

Although high death rate was reported in Rusafa side of Baghdad but this might be due to high number of cases reported at that side and most people regard it as stigmatic disease so they are delayed in seeking medical advice until the last stages of the disease so the prognosis became poor. Moreover, the study reported high recovery rate among those who their ages less than 60 years, females, those who early seeking medical advice and patients without risk factors which is similar to the findings reported by¹¹.

We can conclude from this study that COVID -19 affect all ages but low incidence in children less than 14y of age, males affected more than females, most of the patients seeking medical advice within a period of less than three days from appearance of clinical feature which indicate good awareness of

disease. Fatality rate increase with old age, male gender, presence of chronic diseases and delay in seeking medical advice, while recovery rate increase with younger age, among females, early seeking of medical advice and absence of chronic diseases. Health education of people is necessary to seek medical advice as early as possible to increase recovery rate and decrease mortality.

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