

# Symptomatic COVID-19 Cases Admitted to Al – Diwaniyah Teaching Hospital, Mid – Euphrates Region of Iraq till May 2020

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## ABSTRACT

**Background:** People all over the world were alarmed on February 2020 by the Wuhan lock down, a Chinese big city, because of the discovery of a new coronavirus with a major health threat. The virus was initially named 2019-novel coronavirus (2019-nCoV), but now is known as the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2). Until February 27<sup>th</sup> 2020, the virus has infected more than 82,294 and has caused fatality in 2,804 cases.

**Aim of the study:** The current study was aiming at evaluating the clinical outcome of a sample of symptomatic patients with COVID-19 admitted to Al-Diwaniyah teaching hospital at Al-Diwaniyah Province in the mid-Euphrates region of Iraq.

**Patients and methods:** This cross sectional study was conducted at Al-Diwaniyah teaching hospital at Al-Diwaniyah Province in the mid-Euphrates region of Iraq during the period extending from February the 2<sup>nd</sup> 2020 till May the 2<sup>nd</sup> 2020. The study included 11 patients, 6 males and 5 females with an age range of 19 to 60 years.

**Results:** The age range was between 19 and 60 years. The study included 6 males and 5 females. All patients were from urban areas. The major manifestations reported in all cases were fever, headache and upper respiratory tract symptoms followed by sudden attack of shortness of breath with 5-7 days. Various occupations were reported such as students, housewife, self employee, employee and retired. The outcome was cure in 5 cases. Five cases are still under clinical observation and supportive measures till now. One case fatality was observed and he was a 60 years old male with bronchogenic carcinoma.

**Conclusion:** Symptomatic cases are low in number in our province and cure is the main outcome however mortality is expected even with respiratory support at intensive care unit.

**Keywords:** COVID-19 Al-Diwaniyah teaching hospital, Iraq

## INTRODUCTION

People all over the world were alarmed on February 2020 by the Wuhan lock down, a Chinese big city, because of the discovery of a new coronavirus with a major health threat (1). The virus was initially named 2019-novel coronavirus (2019-nCoV), but now is known as the severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) (1). Until February 27<sup>th</sup> 2020, the virus has infected more than 82,294 and has caused fatality in 2,804 cases (2). In addition to be a health threat, the virus causes substantial economic losses all over the world because of health measures that restricted international trade activities (1). The virus has a relatively large single stranded RNA (26-36 kilobase), is enveloped and belongs to Coronaviridae family (3). Until 2002, the time of appearance of SARS- CoV, coronaviruses were known to cause mild upper respiratory tract manifestation or some mild gastrointestinal symptoms and mammals and birds have been as well known hosts (4-7). In humans, there are at least 7 species of coronavirus that causes diseases. Mild common cold symptoms are attributed to

229E, HKU1, NL63 and OC43, whereas severe disease state is attributed to SARS- CoV, Middle East respiratory syndrome virus (MERS-CoV) and SARS-CoV-2 which were responsible for outbreaks in 2002, 2012 and 2020, respectively (4,5, 8,9). Molecular diagnostic techniques have rapidly developed following the identification and isolation of SARS-CoV-2 virus and these techniques facilitated identification of infected patients (1). Imaging techniques are able to show the characteristic pneumonia associated with SARS-CoV-2 infection which is the most characteristic feature of the

disease known now as Coronavirus Disease 2019 (COVID-19) (4, 9, 10). Patients typically develop acute upper respiratory tract manifestations which are followed in some patients by respiratory failure and other critical complications (11). During the relatively short period of time since the discovery of SARS-CoV-2, there have been several studies dealing with the clinical characteristics and epidemiology of the disease (12, 13, 14, 15). Fever and cough are the most frequently encountered symptoms (12, 13, 14, 15). Severe acute respiratory syndrome is a common feature of SARS, COVID-19 and MERS; however, mortality rate in association with COVID-19 is much lower than that attributed to SARS and MERS, 2.3 % versus 10 % and 36 %, respectively (16, 17).

Early cases in china have reported contact with seafood markets; however, human to human transmission is now the rule (18, 10, 19). Incubation period has been shown to range from 3 to 7 days with a mean of 5.2 days. However, some reports have referred to an incubation period to as long as 24 days in rare situations (18, 15). Droplets, contacts and fomites are the main routes of human-to-human transmission and SARS-CoV-2 can be transmitted by direct or indirect contact with mucous membranes such as those in eyes, mouth and nose (20).

The current study was aiming at evaluating the clinical outcome of a sample of symptomatic patients with COVID-19 admitted to Al-Diwaniyah teaching hospital at Al-Diwaniyah Province in the mid-Euphrates region of Iraq.

## PATIENTS AND METHODS

This cross sectional study was conducted at Al-Diwaniyah teaching hospital at Al-Diwaniyah Province in the mid-Euphrates region of Iraq during the period extending from February the 2<sup>nd</sup> 2020 till May the 2<sup>nd</sup> 2020. The study included 11 patients, 6 males and 5 females with an age range of 19 to 60 years. Information about age, gender, occupation, residency, main clinical features and outcome were reported and transmitted into an SPSS (statistical package for social sciences) spread sheet (IBM, Chicago, USA, version 16) for purpose of statistical description.

The study was approved by the institutional ethical approval committee and verbal consent was obtained from patients or from their relatives following full illustration of the aim of the current study.

## RESULTS

The Characteristics of patients with SARS-Cov-2 infection enrolled in the current study are shown in table 1. The rage range was between 19 and 60 years. The study included 6 males and 5 females. All patients were from urban areas. The major manifestations reported in all cases were fever, headache and upper respiratory tract symptoms followed by sudden attack of shortness of breath with 5-7 days. Various occupations were reported such as students, housewife, self employee, employee and retired. The outcome was cure in 5 cases. Five cases are still under clinical observation and supportive measures till now. One case fatality was observed and he was a 60 years old male with bronchogenic carcinoma.

Table 1: Characteristics of patients with SARS-Cov-2 infection enrolled in the current study

| Patients ID | Age | Gender | Residency | Date Diagnosis | Occupation    | Outcome                 |
|-------------|-----|--------|-----------|----------------|---------------|-------------------------|
| 1           | 23  | Female | Urban     | 15-Mar-20      | Student       | Cure                    |
| 2           | 35  | Male   | Urban     | 16-Mar-20      | Self-employee | Cure                    |
| 3           | 32  | Female | Urban     | 19-Mar-20      | Housewife     | Cure                    |
| 4           | 52  | Female | Urban     | 24-Mar-20      | Housewife     | Cure                    |
| 5           | 20  | Female | Urban     | 1-Apr-20       | Housewife     | Cure                    |
| 6           | 60  | Male   | Urban     | 1-Apr-20       | Retired       | Death                   |
| 7           | 20  | Male   | Urban     | 2-Apr-20       | Self-employee | Still under observation |
| 8           | 33  | Male   | Urban     | 12-Apr-20      | Employee      | Still under observation |
| 9           | 19  | Male   | Urban     | 12-Apr-20      | Self-employee | Still under observation |
| 10          | 32  | Male   | Urban     | 12-Apr-20      | Self-employee | Still under observation |
| 11          | 26  | Female | Urban     | 12-Apr-20      | Housewife     | Still under observation |

## DISCUSSION

In the current study, cases admitted to Al-Diwaniyah Teaching Hospital were 11 in number with a common history in all patients of mild upper respiratory tract manifestation, fever and headache followed by sudden onset of shortness of breath that has started approximately 5-7 days after the onset of fever. There was no gender predilection since 5 females and 6 males were affected. Diagnosis in these cases was confirmed by molecular methods at the central health laboratory in Baghdad. The outcome was cure in 5 cases, 5 cases are still under observation and supportive treatment in the hospital and death was the outcome in a single patient who was already known to have advanced bronchogenic carcinoma.

Previous reports have shown that intensive care admission is needed in 25.9 % of cases. In addition, these reports have shown that about 20.1 % develop acute respiratory syndrome and that respiratory aid in the form of extracorporeal membrane oxygenation and invasive mechanical ventilation are needed in 3.2 % and 8.3 % of cases, respectively, because of critical hypoxemia (21, 22, 23). Shock has been registered in 6.8 % and about 4 % has developed acute renal failure. Acute heart injury has been confirmed in 7.2 to 12.2 % of cases (22, 23). The mortality rate

in association with SARS-CoV-2 pneumonia has been in the range of 4.3 % up to 14.6 % (21, 22, 23). The current mortality rate is estimated at 2.5% but, more precise estimation may be needed in the future when mass screening of population is amenable so that undiscovered cases can be reported and true mortality rate will be more clear (24).

In our province, patients with severe symptoms are often seen by physicians, whereas, those with mild symptoms often rely on self-administered analgesic, anti-pyretic and decongestant agents available in local pharmacies. Therefore, the true picture of the disease in our province need more labored work and the availability of sufficient molecular diagnostic kits to cover all suspected cases and their close contacts.

Globally, it has been claimed that mortality is great in male and elderly patients (21, 25). Patients often die with a period of 14 days from onset of disease; however, death is much earlier in elderly patients (25). To limit global spread of infection, urgent control measures are required which will reduce damage associated with COVID-19 (26). Indeed, travel history may be more important than chest X-ray in detecting SARS-CoV-2 infected individuals (27). Actually, despite all efforts spent by healthcare institutes in our

province, it appeared that the disease spread is increasing and talking about the peak of the curve of spread is still early. In conclusion, Symptomatic cases are low in number in our province and cure is the main outcome however mortality is expected even with respiratory support at intensive care unit.

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