

The Effect of Covid-19 on the Respiratory System

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ABSTRACT

This study aims to assess the risk factors associated with COVID-19 patients at the General Basrah Hospital from June to October 2020. Since COVID-19 is related to acute respiratory distress syndrome, very few interstitial mononuclear inflammatory infiltrates were detected within the heart tissue samples during the research period [3]. The results of the study demonstrate that COVID-19 infections were more common in patients with cardiovascular diseases and acute respiratory. People aged >51 years showed a higher COVID-19 infection rate.

ConclusionsThe study demonstrates that COVID-19 infection rates were higher in patients with cardiovascular and acute respiratory diseases. Covid 19 posed a similar risk to males and women.

KEYWORDS: COVID-19, SARS-CoV-2, FDA, RT-PCR

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INTRODUCTION

The virus, which was eventually recognized as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), caused the COVID-19 condition. It was linked to SARS and was primarily characterized by respiratory symptoms and fever. Due to the contagious nature of the virus, SARS-CoV-2 is rapidly transmitted throughout China, the US, and other nations, leading to COVID-19 infection. The COVID-19 vaccine is administered intramuscularly to inhibit the onset of the disease, which is typically characterized by fever and respiratory problems involving breathing issues. A different coronavirus called SARS-CoV-2 was initially identified in China and it spread rapidly across the globe, resulting in a pandemic. SARS-CoV-2 led to the COVID-19 infection, similar to SARS, but resulting in many deaths, particularly in patients aged >65 years. The coronavirus spread rapidly, which resulted in an epidemic in China, finally leading to a pandemic and an increase in the number of cases across various countries throughout the world (1). In March 2020, the World Health Organization (WHO) proclaimed COVID-19 as a pandemic after it had infected >81.552 cases in China and led to an increasing number of cases (>1.400.000) across the world. By late January 2020, the WHO had officially declared it a public health emergency (2). An increasing number of cases have been documented in several countries across all continents (except Antarctica), with the spread of the epidemic. The frequency of new cases has increased in many countries other than China, including the United States, Italy, and Spain. The disease was designated COVID-19 by

the WHO in February 2020. The COVID-19 virus, formerly called 2019-nCoV (novel coronavirus), has been recognized as severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) (3).

Glucocorticoids: Steroids have been linked to an increased risk of death in influenza patients as well as delayed viral clearance in MERS-CoV patients (4). Even though glucocorticoids have been frequently employed to treat SARS, none of the reports highlighted their significant benefit, however, many studies have observed their short- and long-term detrimental effects. Although there is a global agreement that forbids the administration of steroids, the effects of steroids are yet unknown and might have only a minor impact. Except in special circumstances (like the aggravation of chronic obstructive pulmonary disease or asthma), the WHO/CDC does not advise the administration of glucocorticoids to COVID-19 patients with pneumonia (5). Furthermore, even the Chinese guidelines have proposed short-term treatment strategies that use low-to-moderate doses of steroids for treating ARDS caused by COVID-19 disease (6). According to FDA approval, patients who show mild to moderate COVID-19 symptoms and are likely to develop severe diseases can be treated with specific antiviral medications and monoclonal antibodies (7). Antiviral drugs selectively target specific virus components to limit their spread in the body and prevent the onset of subsequent disease or death. Monoclonal antibodies help the immune system recognize the virus and fight it more effectively. The COVID-19 Guidelines from the National Institute of Health

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(NIH) can be used by healthcare professionals to consult with their patients and determine the appropriate course of action. COVID-19 can be treated in many ways, at home or in an outpatient environment.

METHODS

Here, the researchers collected blood samples from patients at the General Basrah Hospital who reported COVID-19 symptoms like fever, cough, and shortness of breath. This study included all patients that displayed positive COVID-19

RT-PCR (reverse transcription polymerase chain reaction) results during the trial period.

RESULTS

Ages and Sex, Distribution of Patients infected of covid 19. After the analysis of 200 patients, about 80 (40%) were women and 120 (60%) were men positive of covid 19. The age group > 51 year was more infected 80 (40%) as shown in (Table. 1).

Table 1: Age and sex distribution of patient infected with Covid 19

Variables	Frequency (%)
Sex	
Women	80 (40)
Men	120 (60)
Age group in years	
5-15	10(5)
16-35	50(25)
36-50	60(30)
>51	80(40)

Table 2: Frequency and Percentage of patient infected with Covid 19 and suffer from different diseases

Among these patients, 88 (44%) were have respiratory disease and 64 (32%) were have cardiovascular disease. Out of 200 patients, 25 (12.5%) and 23 (11.5%) were have hypertension and diabetes respectively (Table 2).

Variables	Percentage (%)	Frequency
Hypertention	12.5	25
Diabetes	11.5	23
Cardiovascular disease	32	64
Respiratory disease	44	88
Total	100	200

DISCUSSION

When the 200 Covid-19-positive patients were analysed, the results indicated that 80 patients (40%) were women while 120 (60%) were men. As presented in Table 1, 80 patients (40%), aged >51 years exhibited a higher infection rate. Of the 200 patients who were analysed, 64 (32%) had cardiovascular disease, 88 (44%) experienced respiratory diseases, 25 (12.5%) patients were diabetic, and 23 patients (11.5%) were suffering from hypertension (Table 2). Since COVID-19 is connected to acute respiratory distress syndrome, very few interstitial mononuclear inflammatory infiltrates were found within the heart tissue samples [8]. Shi et al. found that 5.3% of 57 out of 416 patients showed symptoms of cerebrovascular sickness, 4.1% had heart failure, and 10.6% showed symptoms of coronary heart disease, demonstrating the extent of cardiac damage in COVID-19 patients. According to a case study [9], a 53-year-old Caucasian woman, who was generally healthy despite the absence of interstitial pneumonia signs and symptoms, was affected by myocarditis. Despite the absence of the myocarditis-causing human papillomavirus, enterovirus,

parvovirus B19, Epstein-Barr virus, HIV, human herpes virus, join virus, and hepatitis C virus in the test samples, the results of a second case report [10] that examined an infected 69-year-old man from Lombardy, Italy, indicated that COVID-19 was probably responsible for myocarditis. Hydrocortisone helped in improving its clinical condition. Furthermore, a recent study established the relationship between Kawasaki disease (a medium-sized vacuity-related disease) and COVID-19. Earlier studies could not confirm the relationship between Kawasaki disease and HCoV. However, Sheraton et al. [5] proposed that HCoV-229E could cause Kawasaki disease. Additional case-control studies are needed to overcome this issue. The extent, intensity, and duration of the SARS-COV-2 virus's effects on the cardiovascular system, which leads to viral pneumonia, remain unknown. Two individuals who participated in the trial involving 75 participants died of acute myocardial infarction [11].

CONCLUSIONS

The study demonstrates that COVID-19 infection rates were

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higher in patients with cardiovascular and acute respiratory diseases. Covid 19 posed a similar risk to males and women.

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