

Impacts of COVID 19 on Chronic Obstructive Pulmonary Disease Patients

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Abstract

Patients with chronic airway and lung diseases had severe infection with the new coronavirus due to both coronavirus and chronic lung disease causes scarring and inflammation of the lung. So this short review aimed to assess the impact of COVID 19 among Chronic Obstructive lung Disease patient. A systematic search was conducted in electronic databases to identify relevant peer reviewed studies then data were extracted to summarize, judge on the impact, prognosis and prevention ways of Chronic Obstructive Pulmonary Disease patients from COVID 19. It was conclude as the comorbid diagnosis of COPD emerged as a specific risk factor for negative prognosis from COVID-19. As the number of people infected with the virus was dramatically increasing throughout the world, it should be given due attention for patients have COPD and other respiratory problems.

Keywords: COVID 19; COPD; Prognosis; Impact

Introduction

The novel coronaviruses which attack all human beings without differentiating age, sex, and race are a group of viruses which typically affect human and other mammal's respiratory tract and their guts. After the infection originated in China, it was disseminated everywhere in the world and currently affected more than 25 million people without differentiating the economic status of countries [1,2].

It is a contagious disease showing similar manifestation with other respiratory tract infections like cough, shortness of breath, high grade fever, chills, sore throat, and shows compatible symptoms within 11.5 days [3,4].

Reports were showing that the coronavirus spreads along a similar upward trajectory around the world making it difficult the control of pandemic. Even though evidence from the disease was saying that, a great number people infected with the virus will experience minor illness and recover easily, but the number of deaths is increasing dramatically [5].

Asthma, chronic bronchitis, and Emphysema causes an inflammatory reaction to the airways, alveoli, and pulmonary vessels, as a result, lung structure and function will be affected and leads airflow limitation [6,7].

Worldwide, 4 million people die prematurely from chronic lung disease and it will become a fourth leading cause of death by 2030; from this, above 90% of deaths occur in low and middle-income countries [8-10].

Previous experience of other viral infection on COPD patients

The current viral epidemic is not new, as far literatures are showing that the existence different epidemics in different time made people with comorbidity more susceptible and resulted in poor prognosis from the diseases. Similarity in clinical manifestation, disease severity and ease ways of disease transmission all arisen viral epidemics made every individual at risk of acquiring the disease as well as making the disease transmission ever fast.

One of the epidemic occurred was H5N1 avian influenza, in which considerable morbidity and mortality, especially in high-risk groups such as patients with COPD was observed. Similarly, H1N1 influenza virus resulted in hospitalization of patients with chronic obstructive lung disease [11-14].

Besides Middle East Respiratory Syndrome (MERS) coronavirus's DPP4 is up-regulated in the lungs of COPD patients, showing that they are more susceptible to MERS-CoV infection. Evidence showed that if patients attacked by MERS, admitted to intensive care unit, the probability of death is high [15,16]. It was unable to not say the condition worsens if comorbid condition exists.

Impact of COVID-19 in COPD patients

It will damage alveoli and bronchus. Also, patients with COVID 19 lung features were dominated by global injury to the alveoli [17,18].

Different evidences suggested that patients with chronic airway and lung diseases had severe infection with coronavirus due to scarring and inflammation of the lung [19,20].

Currently coronavirus infection associated with increased morbidity and mortality rates in those patients and it was among 10 top comorbidities associated with COVID-19 fatalities [21,22]. Also, according to Center of Disease Control except for people with mild asthma, the other might be at greater risk of getting sick of coronavirus. [23] Additionally, patients with comorbidities are at risk for the disease [24].

Prognosis COPD patients from COVID 19 disease

Studies indicated that respiratory failure is among the top cause of death in patients with COVID-19 [25]; if the patient has COPD the prognosis will be unfavorable. Patients with any comorbidity have poor clinical outcomes than those without [26].

Preventive measures for COPD patient from COVID 19 disease

Due to patients with chronic obstructive lung disease are at high risk of coronavirus, they should take appropriate preventive measures.

Different studies shows, one of receptor Novel coronavirus using receptor, angiotensin-converting enzyme 2, production is increased in chronic lung disease Patients [27,28] which make them more susceptible for the infection.

While the pandemic increasingly attacking comorbid patients it is recommended by studies, chronically reducing of this enzyme activity may have significant benefit for those patients [29,30], in order to tackle the viral infection severity.

Center for disease control recommends all patients having chronic diseases should take appropriate precautions and take extra care to avoid COVID-19 infection and should also seek prompt medical attention if they or anyone in their family show symptoms of COVID-19 [31].

Conclusion

With the existing limited evidence, the comorbid diagnosis of COPD results in poor outcomes among COVID-19 patients. As the number of people infected with the virus was dramatically increasing throughout the world, it should be given due attention for patients have COPD and other respiratory problems. Also, the world health organization is warning the rise of second round epidemic the problem will be worse than the expected.

Competing Interest

The author declare that, I don't have any conflict of interest.

Ethical Statement

Not applicable.

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