DOI: 10.1002/jmv.26919

COMMENTARY

JOURNAL OF MEDICAL VIROLOGY WILEY

The impact of COVID-19 pandemic on asthmatic patients

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The long-term inflammatory condition of the airways of the lungs is asthma. It is marked by variable and recurrent signs, blocking of reversible airflow, and bronchospasms that are easily caused. Symptoms include wheezing spells, coughing, tightness in the mouth, and shortness of breath. This can occur a couple of times a day or a couple of times a week. Asthma symptoms can get worse at night or with exercise, depending on the person.[1]

Generally, the prognosis for asthma is strong, especially for children with mild illness. Due to greater understanding and advancement in treatment, mortality has declined over the past few decades. The mortality rate was 170 per million for men and 90 per million for women in 2010. Rates vary 100-fold between countries.[1]

The 2019 coronavirus disease pandemic (COVID-19) has taken over the vast majority of countries exponentially, overwhelming healthcare networks all over the world.[2]

There is some evidence to date that among the adult patients admitted to the hospital with COVID-19, people with asthma are overrepresented.[2]

With acute asthma exacerbation, the most frequent presentation signs of COVID-19, dry cough and shortness of breath also is common.[2]

In consideration of the diverse clinical manifestations of COVID-19, screening criteria for COVID-19 can be extended to those with deteriorating respiratory symptoms, even those with asthma. Those initiating screening should use adequate personal protection equipment.

Nebulization is an aerosol-generating surgical technique which can raise the risk of severe acute respiratory syndrome coronavirus 2 aerosolization and transmission of infections.[3]

To avoid exacerbations and restrict outpatient clinic and emergency department exposure, it is recommended that patients with asthma continue to take both regulation inhalers and other asthma drugs as required during this pandemic. Fever, weakness, anorexia, or myalgia can be signs that may separate COVID-19 from exacerbations of asthma triggered by another stimulus. Because of the possibility of aerosolization, patients with suspected or confirmed COVID-19 should avoid nebulizer therapies.[3]

For the prevention of lung disease associated with COVID-19, oral steroids are not indicated. However, existing guidelines for patients with asthma are to use oral steroids for moderate-to-severe exacerbations of asthma that respond adversely to bronchodilators and the use of these steroids hastens the relief of symptoms and eliminates the risk of hospital admission.

Some studies have shown that an elevated risk of hospitalization has not been associated with asthma. Similarly, COVID-19 induced hospitalization was not associated with the use of inhaled corticosteroids with or without systemic corticosteroids.[4]

The distribution of the angiotensin-converting enzyme 2 (ACE2) receptor in the respiratory airway epithelium may depend on one potential reason as to why COVID-19 is not correlated with greater hospitalization rates among asthmatics. Diabetes mellitus and hypertension have been suggested to increase the expression of ACE2, whereas inhaled corticosteroid use may decrease the expression of ACE2, resulting in further difficulties with viral entry.[5] It does not indicate that children with asthma are adversely impacted by COVID-19.[4]

Outcomes, likely by increased adherence and/or decreased exposure, may also have changed. By restricting and replacing physical appointments with simulated experiences, health facilities have effectively adapted to the pandemic.[5]

Moreover, COVID-19 has a bad impact on the metal health of asthmatic patients especially in the beginning of the pandemic when they heard that COVID-19 is lethal to patients with chronic disease such as asthma. However, Asthmatic patients thought that they are more vulnerable for the disease than the others so many of them were following the preventive measures and committed to the quarantine to avoid infection.[4]

Many studies found that asthma is not a comorbidity for COVID-19 and asthmatic patients have the same risk of other people even with steroids treatment but it can exacerbate the dyspnea in some patients with is not significant.[5]

CONFLICT OF INTERESTS

All the authors declare that there are no conflict of interests.

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How to cite this article: Hashim HT, Ramadhan MA. The impact of COVID-19 pandemic on asthmatic patients. *J Med Virol*. 2021;93:2571–2572. https://doi.org/10.1002/jmv.26919