



# Asthma and COVID-19

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To the Editor,

The severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), recently referred to as COVID-19, is a novel strain of coronaviruses that has aggressively spread since the first report in Wuhan, China, and the World Health Organization (WHO) declared it a pandemic on the 11<sup>th</sup> of March. Since then, there has been great concern about the effect of asthma on the outcome of COVID-19 infection. However, available data about the possible effect of asthma on COVID-19 infection is scarce. None of the 140 hospitalized adult patients in Wuhan reported asthma or other allergic diseases, and the authors conclude that allergic diseases, asthma and chronic obstructive pulmonary disease may not be risk factors for COVID-19 infection (1). On the other hand, viruses that infect the respiratory system are risk factors for asthma exacerbations, and early life respiratory viral infections may even lead to the development of asthma (2).

On the 19<sup>th</sup> of March, the Global Initiative for Asthma (GINA) made the following recommendations about the use of inhaled asthma controller medications: “patients with asthma should not stop their prescribed inhaled corticosteroid controller medication (or corticosteroids); stopping corticosteroids often leads to potentially dangerous worsening of asthma; avoiding oral corticosteroids during severe asthma attacks may have serious consequences. It is dangerous to stop long-term oral corticosteroids suddenly.” (3). On the 25<sup>th</sup> of March, GINA answered frequently asked questions about asthma and COVID-19 on their web page (4). In this report, they repeated their first statement and also recommended biological therapies in severe asthma patients who qualify in order to minimize the need for systemic corticosteroids. Nebulizer treatment should be avoided due to increased risk of contamination,

and a pressurized metered dose inhaler via a spacer was recommended for the treatment of severe attacks. Spirometry should be postponed, or performed only if absolutely indicated, and after adequate infection measures taken to reduce risk of viral transmission (4).

The Centers for Disease Control and Prevention (CDC) announced that limited information is available about the risk factors for severe COVID-19 disease. However, older adults and people with serious underlying medical conditions might have higher risk for severe illness from COVID-19. The CDC stated that people with moderate to severe asthma may be at higher risk of getting very sick from COVID-19, and may experience an asthma attack, pneumonia or acute respiratory disease. In addition to all the recommendations made for the general population, the CDC recommends that patients with asthma should continue asthma medications including corticosteroids, avoid asthma triggers, and should talk with healthcare provider, insurer and/or pharmacist in order to make sure that they have 30 days of medications available in case they need to stay home for a long time (5).

Allergic and/or nonallergic rhinitis frequently accompany asthma, and there is little knowledge about the use of intranasal topical medications and especially corticosteroids in COVID-19 infected patients. Recently, the ARIA-EAACI proposed a joint statement about the use of intranasal corticosteroids in allergic rhinitis in COVID-19 infection (6). Based on 209 replies from 61 countries (ARIA database, 509 members, 84 countries), the questionnaire study recommended the following: intranasal corticosteroids can be continued in allergic rhinitis at the recommended dose and stopping them is not advised, suppression of the immune system has not been proven, and more sneezing after stopping intranasal

corticosteroids means more spreading of the virus. However, they state that these recommendations are conditional and should be revised regularly since there is paucity of data (6).

In accordance with previous recommendations, the National Institute for Health and Care Excellence (NICE) has published a COVID-19 rapid guideline in order to maximize the safety of adults and children with severe asthma while protecting the staff from infection during the COVID-19 pandemic (7). Severe asthma was defined as “asthma that requires treatment with high-dose inhaled corticosteroids and a second controller to prevent it from becoming uncontrolled or which remains uncontrolled despite this therapy.” In addition to the recommendations made about communication with patients and minimizing the risk of transmission, additional recommendations were made regarding biological treatment. They state that there is no evidence that biological therapies for asthma suppress immunity. However, if the patient attends the hospital for injections, the healthcare provider may consider whether patients could be trained to self-administer to reduce the need for hospital visits, or be treated at home or at the community clinic (7). Biological treatment can be started even if adherence to regular treatment cannot be assessed; a multidisciplinary team discussion is not necessary and two senior clinicians could make the decision to start this treatment (7). In accordance with the NICE guidelines, the Turkish National Society of Allergy and Clinical Immunology have made recommendations regarding the management of severe asthma during the COVID-19 pandemic on their official website (8).

On the 16<sup>th</sup> of March, the Turkish Ministry of Health announced that all patients with chronic health conditions including asthma can receive all their medications directly from the pharmacy without the need for a prescription and in the amount that covers 30 days of treatment. After the announcement of the first case in Turkey, asthma patients and their relatives experienced anxiety regarding how severe COVID-19 infection and asthma would affect them. Most of them did not attend scheduled visits for biological treatment, and many could not seek medical care due to fear of transmission of the virus. Immediate arrangements should be made in order to overcome the future possible exacerbations and morbidity we may encounter in this vulnerable group of patients.

In conclusion, there is concern about the possible effect of asthma on the severity of COVID-19 infection, whereas there is no evidence yet that asthma is a risk factor. National and international health societies recommend regular use of inhaler corticosteroids and other controller medications. The use of intranasal corticosteroids for accompanying allergic rhinitis is advised. In case of an exacerbation, systemic corticosteroids may be used if needed. When an indication is present, the treatment of asthma with available biological agents is recommended, and self-administration or home treatment can be considered in these patients.

**Keywords:** Asthma, COVID-19, corona virus, SARS-CoV-2

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